

# AMERICAN BEE JOURNAL

APRIL 1916

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Dr. Gates, of Massachusetts, Demonstrating Bees



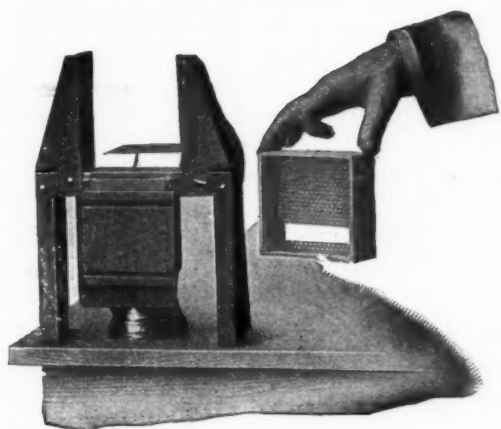








# Woodman's Specialties



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**GOLD MEDAL** for the finest comb honey at the recent Michigan 50th anniversary convention, was won by Floyd Markham, of Ypsilanti Mich. He says:

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Air spaces or packing as you prefer. Seven-eighths" material in the outer wall, which means that they will last a life time. Used and endorsed as the best hive on the market by many prominent beekeepers of this and other countries.

Price, \$14.75 for five hives, delivered to any station in the U. S. East of the Mississippi and North of the Ohio Rivers.

Our State Agricultural College has just been voted a generous sum of money to be used in the construction of an Apian Building and outfit. They are negotiating with me for some colonies, and I will furnish them in your Protection Hives, for I believe them to be the best on the market.

Send for catalog and special circulars. We are the beekeeper people. Send us a list of your requirements for 1916, and let us figure with you

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## TIN HONEY CANS—LOW PRICES

Our three-year contract is protecting us from high prices until July 1st. We will give the beekeepers the benefit of our low prices, so be sure you secure your supply before that date. 60-lb. cans shipped from Ohio factory or Chicago—friction-top from Chicago. Give us the quantity wanted and let us figure with you. Friction-top cans and pails—5-lb. size, per 50, \$2.50; 100, \$4.50; 203, \$8.50; 1015, \$40 10-lb. size per 50, \$3.50; 100, \$6.25; 113, \$6.75; 505, \$33.75.

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Everybody knows Campbell, the father of dry farming. Everybody knows that he started this great movement for Scientific Farming that is changing the desert into a garden. But everybody does not know that there is a great school, the

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"We are furnishing Kenneth Hawkins, the 'Quality Hill Queen' Breeder, one of our 'Queens of Quality,' and will offer queens from one of The Review mothers crossed with his 'Quality Hill' Drones for 1916. Mr. Hawkins' breeders originated with Doolittle. We do not think one can make a mistake in buying this stock."

The Review, Dec., 1915. This Townsend breeder exceeded the average of 1100 colonies by over 500 percent last year. These excellent honey queens 1, \$1.6, \$5, 12, \$9 until July 1. Write for booklet on Quality Hill Queens and pound packages, and get our special discount for quantities. There sure will be quality here.

**KENNETH HAWKINS, PLAINFIELD, ILLINOIS**

## Archdekin's Fine Italian Queens

3 BANDED

Prolific—Hardy—Gentle—They are Persistent—Profitable Producers—None Better

Prices	Before July 1			After July 1		
	1	6	12	1	6	12
Untested.....	\$1.00	\$5.00	\$9.00	.75	4.00	7.00
Tested.....	1.50	8.00	15.00	1.00	5.50	10.00
Sel. Tested...	2.00	10.00	18.00	1.50	8.00	15.00
2-fr. Nuclei...	2.50	14.00	26.00	2.25	12.00	22.00
1-lb. pkg. bees	1.50	13.00	25.00	1.25	7.00	13.00
2-lb. pkg. bees	2.50	14.00	28.00			

Above prices of nuclei do not include queen. Add price of queen wanted. Satisfaction and safe arrival guaranteed. Absolutely no disease in this country. Get your order in early and secure prompt delivery. Orders booked if half of amount accompanies order. Queens ready April 15th. Nuclei and packages May 1st.

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## CULTIVATE HORSE-RADISH GARDEN, FIELD OR FARM

Increasing Demand—Large Profits  
100 Root Sets with full information \$1.00

Write for list of our \$1.00 **Friend Makers**, consisting of all kinds of Fruit Trees, Berries and Roses. Honey accepted in payment for all our products.

**VALLEY FARM CO., NEWBURGH, N. Y.**

# American Bee Journal

## You Should Earn \$25 Per Colony from Bees this Season

**T**HIS can be accomplished if you have a young prolific queen and a strong colony when the honey flow arrives. Many beekeepers fail to secure the greatest possibilities from their bees because their colonies are not strengthened and built up early in the season, making it possible for them to take advantage of the honey flow when it arrives. This should be a good season for clover honey, as weather conditions last year throughout the country were the best we have had for many years for securing a good strong stand of clover.

We now have a large queen-rearing outfit in Florida for the express purpose of supplying you with **EARLY QUEENS AND BEES IN PACKAGES**. We are breeding from queens that gave a surplus of 300 pounds per colony in a 24 day honey flow. You should have this strain of bees in your yard, and insure the placing of each of your colonies on a paying basis. We have a large supply of queens at this time, but as orders are coming in rapidly, we recommend that you provide for your requirements early.

Island Bred Italian Queens. Shipments began March 1st.

	1	6	12
Untested.....	\$1.50	\$ 7.50	\$12.00
Tested.....	2.00	10.50	18.00
Select Tested.....	3.00	15.00	24.00

Tested Breeding Queens, \$5.00 and \$10 each.

Prices on Bees by the pound f. o. b. shipping point.  
Shipment begins May 10.

	1	6	12
1/2 lb.....	\$1.50	\$ 7.50	\$12.00
1 lb.....	2.00	10.50	18.00
2 lbs.....	3.00	15.00	27.50
3 lbs.....	4.00	21.00	36.00
5 lbs.....	5.50	27.50	50.00

(These prices are without Queens.)

Prices of Nuclei and Full Colonies without Queens. Shipping now.  
1 Frame Nucleus, \$2.00; 2 Frame Nuclei, \$3.00; 3 Frame Nuclei, \$4.00; 5 Frame Nuclei, \$5.00; 8 frame Colony, \$8.50; 10 Frame Colony, \$10.  
Address all communications to

**THE J. E. MARCHANT BEE & HONEY COMPANY, - Canton, Ohio**

### "MARTINE FOUNDATION FASTENER"



PATENT APPLIED FOR

vice. Price, 50 cents, postage paid. Satisfaction guaranteed. On sale only by

**J. P. MARTINE & SON** **Beeskeepers**  
**206 East Jefferson St.,** **Supply Dealers**  
**Louisville, Kentucky**

Latest and best device invented for fastening foundation securely to the frame or section with a tiny stream of hot wax.

Prevents breaking down of foundation with the weight of the bees, thereby avoiding crisscross combs.

Saves expense, time and labor.

One filling of the fastener is sufficient to fasten the foundation in five frames and can be done in one-third the time required by any other device.

### Northern Bred Italian Queens

More hardy than Southern bred. Try them once. Untested, \$1.00. Sel. tested, \$1.50. Plans for beginners, "How to Introduce Queens and Increase," 25 cents.

**E. E. MOTT, GLENWOOD, MICH.**

### WE ARE READY

To figure on your wants. Send us a list of goods and we shall be pleased to quote you the very lowest price for the best goods. Established 1899. Our catalog may interest you.

**H. S. DUBY & SON, St. Anne, Ill**

## 240,000 POUNDS or 120 TONS OF COMB FOUNDATION

That is the Amount We Manufactured and Sold in 1915

### This Extraordinary Output Must Mean that Root Foundation Has Quality

56,000 pounds was made and sold from our branch factory in Los Angeles during ten months of 1915

New York  
Philadelphia  
Chicago  
St. Paul  
San Francisco  
Los Angeles

**The A. I. Root Company**  
Medina, Ohio

Washington  
Des Moines  
Syracuse  
Indianapolis  
Zanesville, O.  
Mechanic Falls, Me.

## Embargo on Bee Supplies In the East

**B**EEKEEPERS in the Eastern States, particularly in New England, should not delay ordering their stock of supplies as early as possible. The Eastern railroads are congested and have even placed an embargo on shipments to various points, refusing to accept freight until their roads are unburdened. Ordering your requirements a month earlier than usual will not cost any more and will assure you of having supplies on hand when the time comes to use them. This will allow for any delay which might occur while in transit.

Our New England States representatives, Ross Brothers Co., 90-92 Front Street, Worcester, Mass., have a large supply of "**Falcon**" bee-supplies, and are especially equipped to handle the New England States beekeepers' orders whether they be large or small.

Those beekeepers living in the New England States can order direct from the factory at Falconer, N. Y., or can write for the name of the nearest dealer as they find it more convenient.

Red Catalog, Postpaid

Dealers Everywhere

"Simplified Beekeeping," postpaid

**W. T. Falconer Mfg. Co., Falconer, New York**

*Where the good bee-hives come from*

## NOW IS THE TIME

**To order your supplies, and thus have everything in readiness for spring**

We carry a full line of Root's Goods at all times, and are always prepared to fill any and all orders on short notice.

Hives, supers, frames, sections, comb foundation, section-presses, foundation fasteners, queen-excluders, queen, and drone traps, swarm-catchers, feeders, honey and wax extractors, capping melters, honey-knives, honey-tanks, honey-packages, shipping-cases, bee-escapes, bee-veils, bee-gloves, bee-brushes, smokers—in short, everything the beekeeper requires for the proper conduct of an apiary.

**C. H. W. Weber & Company, 2146 Central Avenue, Cincinnati, Ohio**

## The CANADIAN HORTICULTURIST AND BEEKEEPER

*The only bee publication in Canada*

It is the official organ of the Ontario Beekeepers' Association and has incorporated with it the former Canadian Bee Journal.

Beekeeping and Horticulture in its various branches are effectively combined to form a live, attractive, and practical monthly magazine.

Well illustrated and up-to-date. Subscription price postpaid.

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Read what J. I. Parent of Chariton, N. Y., says: "We cut with one of your Combined Machines last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 frames, and a great deal of other work. This winter we have a double amount of hives, etc. to make with this saw. It will do all you say of it." Catalog & price-list free

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By using labor saving devices, The Rauchfuss Combined Section Press and Foundation Fastener, The Rauchfuss Foundation Cutting Box, The C. H. P. A. Section Scraping Knives



are three articles that will save comb-honey producers many precious hours during the busy season. They are now used by many beekeepers of the West, and the price is low enough to place them within the reach of all. Write today for our 68-page Illustrated Catalogue of the best bee-supplies made.

**THE COLORADO HONEY PRODUCERS' ASSOCIATION, Denver, Colo.**

## TESTED QUEENS BY RETURN MAIL \$1.00 each

These Queens are not culls or inferior in any way because they are cheap. They were reared last September and October, and wintered in 4-frame nuclei, expressly for our early trade in tested queens. We guarantee every queen to be good as the best. No disease in our apiary. Untested queens early in April. \$1.00 for single queen; \$9.00 per dozen.

**J. W. K. SHAW & COMPANY**  
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# MAKE THIS A **LEWIS YEAR**

While you are starting the year's work—getting your bees ready for business—taking stock of supplies on hand and speculating as to what the season's outcome will be

## **MAKE THIS RESOLUTION**

That you will use LEWIS BEEWARE this year—because it means success insurance to you---because it means bee-hives and parts made of the best material by skillful workmen---because it means goods accurately and systematically packed---because it means sections made of bright lumber, highly polished, accurately dovetailed and scientifically grooved.

**LEWIS HIVES ARE BUILT LIKE FURNITURE**

Lewis sections are the kind that do not break in folding

**You will find Lewis Beeware almost at your own door—thirty distributing houses in the United States and foreign countries. If you have not one of our catalogs, send for a copy at once.**

**G. B. Lewis Company**

**Exclusive Manufacturers—Lewis Beeware**

**Watertown, Wisconsin, U. S. A.**



Vol. LVI.—No. 4

HAMILTON, ILL., APRIL, 1916

MONTHLY, \$1.00 A YEAR

## Beekeeping in Massachusetts

What One State is Doing for the Advancement of the Honey Producing Industry—By Frank C. Pellett

**I**N many respects Massachusetts is doing more for the beekeepers than any other state. There have been courses offered for a longer or shorter period in the agricultural colleges of several states, but it remained for Massachusetts to set the pace by being the first to take up beekeeping seriously and place it on the same footing as other agricultural activities. As much of the pioneer work in the development of practical apiculture was done in New England, so the pioneering in educational work along the same line has also been done there.

As was said in the article about official beekeeping at Washington, beekeeping as a serious business is very new; so new, in fact, that the general public has not yet come to take it seriously. Too many beekeep-

ers regard it as a business of such limited possibilities that they fear the development that will come from the entry of new men into the field. The authorities of the Massachusetts agricultural college were among the first to realize something of the possibilities of honey production. They were able to see that as a specialty it was bound to prosper, as vegetable growing, dairying, floriculture and other agricultural specialties are doing. Provision was made accordingly, to lend the same encouragement to beekeeping that was offered the other lines.

The work was started on a modest scale by the employment of Dr. Burton N. Gates, at that time of the U. S. Department of Agriculture, to give a short course of lectures. The interest justified further work along this

line, and Dr. Gates was eventually induced to take up the work permanently at Amherst.

Since Massachusetts was the first state to organize the beekeeping work extensively, there was no precedent to serve as a guide. Dr. Gates and his associates are therefore entitled to a great deal of credit for the admirable manner in which the work has developed. There is a tendency in some agricultural colleges to make the work in various departments so technical as to be of little real value to the man who seeks training for practical work. The writer has heard the complaint that boys trained in some agricultural colleges were no



THE APICULTURAL BUILDING



DR. BURTON N. GATES.



CLASS IN APICULTURE IN THE MUSEUM

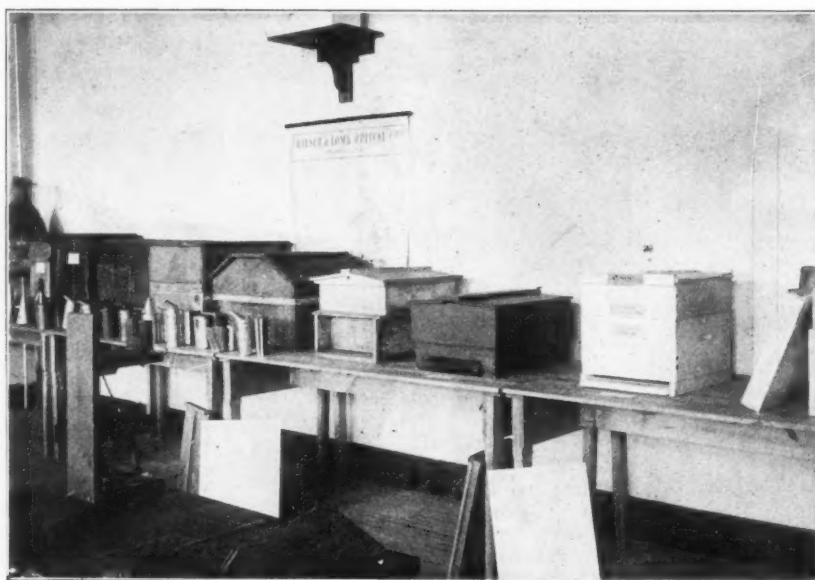
longer of value on the farm, as they were filled with fine spun theories which would not work in practice. Fear has been expressed in several quarters that similar conditions would prevail in the new courses in beekeeping that are now being offered in several institutions. A recent visit to Amherst convinced the writer that Dr. Gates is very practical in

his instruction, and that the student will know something besides the anatomy of the honey bee when he gets through. While Dr. Gates places due importance on the scientific side of beekeeping, he insists that everything must first be practical, bearing in mind that greater efficiency in honey production is the ultimate aim of apicultural education.

One feature that especially pleased the writer is the centralizing of all apicultural work under one head. Dr. Gates has charge of the apicultural work for regularly enrolled students, investigation for the experiment station, apicultural extension authorized by the extension service, and, also, the inspection work under the State Board of Agriculture. Where these different lines of work are handled by different persons without the same central authority, it is out of the question to secure as efficient service and as satisfactory results as is possible under the Massachusetts plan.

Four years experience as state inspector of apiaries has convinced the writer that best results from inspection work will never be secured in any other way. Special skill is required in inspection work and an inspector should have wide experience in bee diseases. In an epidemic of glanders, none but trained veterinarians are permitted to represent the state. While an inspector should be a practical beekeeper he needs at the same time a special training that few beekeepers have. Where the work is properly correlated it is quite possible to utilize the services of the same man in inspection work at one season, and extension work or some similar line the rest of the year.

Massachusetts makes a larger appropriation for inspection work than most other states, considering the size of the state and the number of apiaries. The work



A CORNER OF THE MUSEUM



# American Bee Journal



WAX EXHIBIT AT THE COLLEGE

is very thoroughly done. Beginning in an infected locality every colony of bees is examined in an ever widening circle, until the limit of infection is found. In many states such thorough work is impossible because of lack of funds. The effect of the work is apparent in comparing the percentage of infected apiaries in 1911 and in 1914. During that period of time the percentage has dropped from 45% to 14%, while there has been increased interest in bee culture owing to improved conditions. Dr. Gates regards the inspection work as an educational unit in the general system, and while diplomacy is sometimes necessary in dealing with a refractory case, there is no longer any question of the value of the work to the beekeepers of the state.

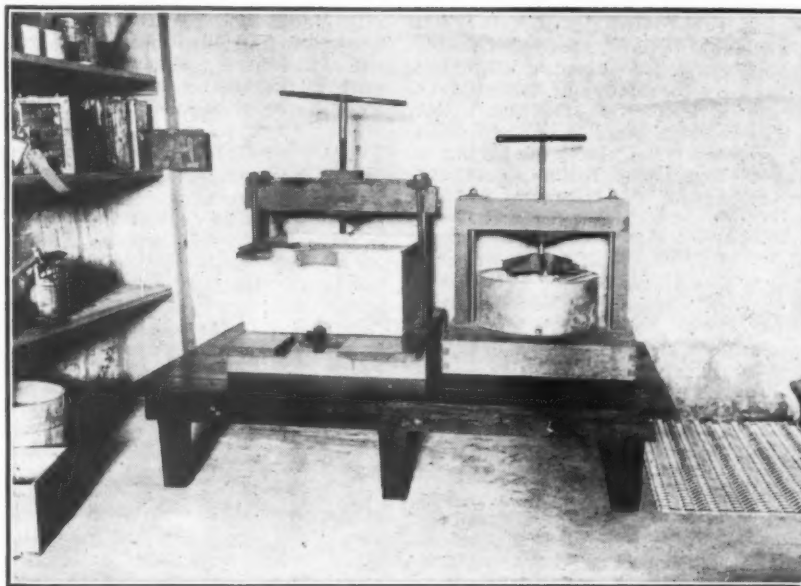
## THE COURSES.

Dr. Gates announces that the work as given in the college has but one primary aim, viz., to fully equip the student with the fundamentals of the industry. However, since research work requires broad training in the sciences

as well as in the art of beekeeping, courses are so arranged that those who need the scientific training can readily take it in connection with the practical work. Space will not permit detailed account of courses offered. Interested persons can secure full information from the catalogue.

## THE MUSEUM AND LIBRARY.

Nowhere in the world, perhaps, is there a museum of beekeeping utensils equal to the one at Amherst. Dr. Gates has collected thousands of specimens of utensils of every conceivable kind, both American and foreign. The natural history of the bee and the products of the hive are illustrated by numerous illustrated examples. The museum affords a splendid opportunity for comparisons of the equipment used for various sections of the country and systems of management. The supplies offered by the various manufacturers are placed side by side, and the interested beekeeper is able to see for himself what are the merits of the various brands. The development of apiculture is nicely shown in the var-



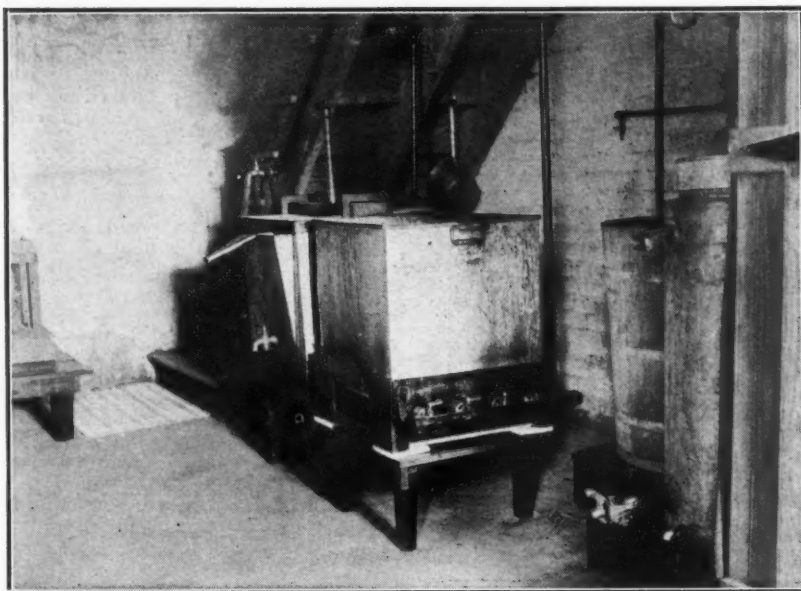
WAX EXTRACTORS SET UP FOR COMPARISON AT MASSACHUSETTS



JOHN L. BYARD IN THE COLLEGE APIARY

ious kinds of hives and implements that have been used during the past half century. Straw skeps, box hives, cupboard hives and almost all the other kinds in use before the standard hanging frame hive came into use, are displayed. It is worth a long journey just to visit this museum and see this wonderful collection. The writer had never seen Allen Latham's let-alone hive until he visited the museum, nor had he seen a number of other articles of equipment often mentioned in the beekeeping literature. The student who has this wealth of material at hand when he is studying the books and papers relating to his specialty will have a splendid opportunity to become familiar with everything in the way of equipment that has been used in recent years, as well as many things long obsolete. There are some things of historical interest, such as

# American Bee Journal



PART OF THE WAX RENDERING EQUIPMENT

equipment used by Langstroth when he was making his experiments.

The library of beekeeping literature is also very complete and the student has the advantage of a reference list such as is to be found in few places in this country. Dr. Gates is laying a splendid foundation for a permanent institution and the museum and library are very valuable features.

#### APIARY AND GARDEN.

There is nothing particularly striking about the apiary. It is much like any other well kept apiary where up-to-the-minute practice is followed. The bees are in standard hives and the students are thus able to become familiar, by actual practice, with the equipment and methods of manipulation commonly used in well regulated apiaries. There is a well equipped workshop where the student is given actual practice in nailing up hives and assembling supplies. There is the usual equipment in extracting and bottling honey so that all the operations necessary to successful honey production are followed out as part of the regular class duty. Both out-of-door and cellar wintering are practiced. The bee cellar is as good as can well be made and the packing cases are of the four colony size. After preparing the bees for winter by both methods and noting results the following spring, the student has received the best possible instruction in proper wintering. It is very apparent that every step is followed in the same practical manner.

A garden of honey producing plants is now being developed, where the various plants to be found in that section may be gathered and studied. The time when each secretes nectar can be noted, and the comparative value considered.

Since several short courses of varying length are given, every facility is offered to students to make the best possible use of such time as is available. The winter students, of neces-

sity, lack the opportunity of actual work in handling bees, but apiary work and hive manipulation are a part of all the summer courses as well as the regular full year courses.

#### WAX RENDERING.

The wax rendering station is a unique feature of the institution. We had intended to describe it somewhat in detail, but this article is already very long. The field work in connection with inspection and extension soon convinced the college authorities that thousands of pounds of wax were being lost every year because the average beekeeper is not equipped to care for it properly. The man with but a few bees seldom has

the necessary equipment for rendering wax thoroughly and the crude methods in common use waste a large part of the product. Wax is the highest priced commodity which the beekeeper has to sell and he can ill afford to waste it even though the amount is small.

In order to meet the need which was so apparent the wax rendering equipment was installed. The work is done entirely for the benefit of the beekeepers of the state and without any financial profit. The charge is the actual cost of operation. By means of the superior equipment they are usually able to get enough more wax than the beekeeper could get, to pay for the cost of rendering. This is quite an advantage since it saves the producer a mussy job. While the writer has never had the opportunity to take advantage of such a station conducted for the benefit of the beekeeper at cost of operation, he has found that some commercial establishments are able to get enough more wax than he can to make it unprofitable for him to render his own wax. Accordingly it is all carefully gathered through the season and sent to such a firm in kegs. The returns have been very satisfactory. The practice of shipping of combs, cappings and refuse wax to commercial establishments is becoming more common every year as beekeepers learn of the saving in labor.

For each shipment sent to the college there is a blank to be filled out by the shipper. This gives full instructions for the disposition of the wax. Sometimes it is sent to market to be sold, sometimes returned to the shipper and again it may be sent to some supply dealer to be made into foundation. The wax rendering service is evidently very popular with the beekeepers of the state.



A BATCH OF WAX RENDERED FOR THE PUBLIC

## Trading in Live Bees

BY E. I. FARRINGTON.

**E**very year thousands of bees are used in greenhouses, particularly in those sections where cucumbers are raised under glass. It is impossible to grow cucumbers in winter without bees, unless, indeed, the tedious and expensive plan of fertilizing the blossoms by hand is resorted to. In long houses a hive is located every 150 feet. In 200-foot houses, which are common, one colony is sufficient to a house. Sometimes the hive is placed near the middle aisle and sometimes at the side of the house with another opening leading to the outside. The average greenhouse man knows very little about bees and has no desire to increase his knowledge. As a result, a considerable proportion of the colonies perish before the end of the season and when it is time to fill the house with cucumbers again, it is necessary to buy more bees. One big greenhouse concern in Massachusetts has spent nearly \$175 for bees in one season. In sections of the country where greenhouse work is an important industry, the breeding of bees for the cucumber growers has come to be a specialized line.

Benjamin A. Ford, of Abington, Mass., makes a large part of his living by selling bees to cucumber growers. It is not unusual for him to start the winter with 200 colonies, which number is reduced to 50 or 60 by Spring, all the others having been sold to the greenhouse men. At one time Mr. Ford had three outapiaries, but he has given them up because of the attention required by other lines of work on his little farm, a farm, by the way, which the bees have made possible. It has been found that a combination of bees, pigs and small fruit give a good living on ten acres.

Mr. Ford winters his bees in a manner different from that of most beekeepers in New England. He uses



CLASS IN APICULTURE AT THE SUMMER SCHOOL

what are termed tenement hives which are really covered boxes large enough to accommodate five eight-frame hives. There is a separate opening for each hive so arranged that it comes just opposite the hive entrance. Three of the hives stand side by side at the front of the box, their entrances coming near the sides of the box at the rear. By that arrangement the tenement hive is filled and there is little waste room. The top, which can be lifted off, has a sloping roof to shed water, and some straw or other similar material is wedged between the hives in the Fall to give extra protection through the winter months. There is but little loss and not much more stores are consumed than when bees are wintered in the cellar. Mr. Ford has tried both plans and likes the present method well enough to continue it year after year. The tenement hives are used in sum-

mer as well as in winter, and they aid in keeping the bees cool in hot weather.

The best granulated sugar is fed in large quantities, especially in early Spring. Full sheets of foundation are used in the new frames placed in the hives when the colonies are divided, unless there are partly drawn combs that can be used left over from the previous season. Mr. Ford rears his own queens and of course uses a good many each season.

The business is one which seems likely to grow rather than otherwise, for there is a constant increase in the growing of cucumbers under glass and, besides, a call for bees is coming from orchard men and the owners of cranberry bogs. The value of bees to cranberry growers is just beginning to be realized, and the demand will doubtless grow from year to year. There is a bright future for beekeepers in the East, not only from the increased demand for honey stimulated by honest advertising, but because the value of bees by fertilizing the flowers of fruit and vegetables is coming to be understood as never before.

Weymouth Heights, Mass.

(Probably very few of our readers realized that the demand for bees in greenhouses was as large as this interesting statement shows.

The only fault that we can find with this method of keeping hives, five in a box, is the possibility of rendering the bees irritable when one of the colonies in such a box is being handled, as the jarring stirs up the other four. The only way would be to smoke all of them before handling any. But such a box is ideal for bringing colonies through winter out-of-doors, wherever bees are confined in a hive for several weeks in succession. Editor.)



MR. FORD'S TENEMENT HIVE



# American Bee Journal



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C. P. Dadant, Editor  
Dr. C. C. Miller, Associate Editor.  
Frank C. Pellett, Staff Correspondent.

## IMPORTANT NOTICE.

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rest. It seems that Dr. Cook is not enjoying the best of health, and that he feels it is time to have a change. He is well known to the beekeepers as author of "Manual of the Apiary," and was formerly a professor in the Michigan Agricultural College, where he was one of the first to offer a course in bee-culture.

## Death of a Well Known Editor

Henry Wallace, founder and editor of Wallace's Farmer, is dead. He passed away very suddenly at the Methodist church in Des Moines, Iowa, on Tuesday evening, Feb. 22.

Mr. Wallace was one of the best known writers in the entire field of agriculture, and enjoyed the confidence of men in all walks of life. A truly great man has gone from among us and his passing is widely mourned.

## Cooperation in Honey Sales

Comments upon the leading article in our March number on a publicity campaign and cooperation, are made by some of our readers. Some discouraged producers ask why the National Beekeepers' Association has so utterly failed in the proposed system of centralization, if cooperation is as sure of success as some enthusiasts claim. They say that the citrus growers are wealthier, have more at stake than the beekeepers, and can better afford to pay expensive men to manage their advertising and their sales. This is true.

But perhaps the beekeepers are not starting this thing right. When we build a house, we do not plan the top of the edifice at first. We begin with the foundation. Have we done so?

The National Association started to organize beekeepers centrally, before they were sufficiently organized locally. Our National meetings have thus far always been composed of a large number of beekeepers living in the immediate vicinity of the place selected for meeting and of a few leading producers, dealers, queen breeders, writers, and publishers from a distance. With an organization of this kind, little if any money could be put into any plan that would benefit the beekeeping world.

The beekeepers are scattered producers. In only a few privileged spots are they close together in sufficient numbers to help each other. Even in places where they are fairly numerous they have rarely considered cooperation. Yet cooperation for the advertising and sale of their product, or for the purchase of their supplies, must begin at the bottom. They must build the cellar before they can hope to erect

## THE EDITOR'S VIEWPOINT

### More About Sweet Clover

This office is in receipt of two very valuable booklets on sweet clover put out by the extension department of the International Harvester Company at Chicago.

The larger, 64-page booklet, entitled, "Sweet Clover No Longer a Despised Weed—A Valuable Crop," is an excellent source of information to any one interested in this crop. It gives a description of the plant, method of sowing the seed, influence of different soils on growth, etc., and also reports of the experiences of reliable farmers in scattered sections.

The second booklet, "Sweet Clover Adapted to the Northwest," gives all the advantages of this plant in the sections discussed. It deals especially with the northwestern States, and is a 36-page pamphlet very recently published.

Both of these booklets are for free distribution and may be obtained by addressing request to the Extension Department of the company as above.

### A Collection of Honey Samples

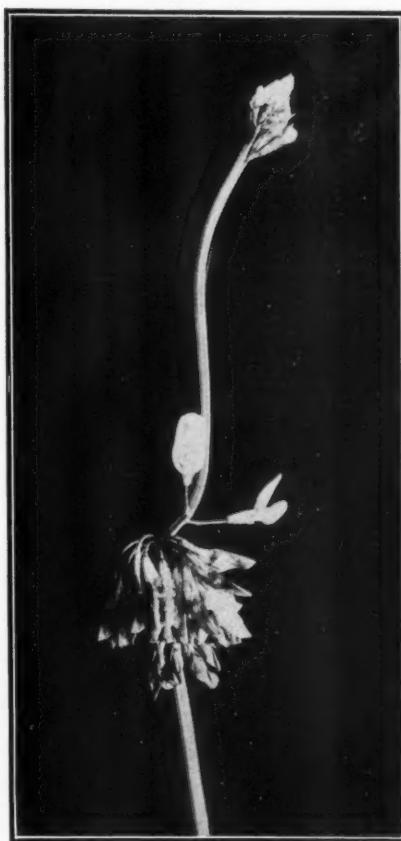
We are beginning a collection of honey from different sources and hope to make it as complete as possible. These samples will be labeled with the date and locality where produced, the name of the producer and the source from which they are gathered. We intend to keep this collection in a case in the office of the American Bee Journal, and will greatly appreciate the assistance of our readers in securing the samples. All honey should be as pure as possible and about a pound to the sample.

Honey comes from so many sources that such a collection should be of much value. Samples intended for this collection should be addressed to the American Bee Journal and not to any

member of the firm. It will be used to assist our readers to determine the source of their crops in doubtful cases, and is not designed for any commercial use.

### Dr. Cook to Retire

A recent issue of the California Cultivator contains the information that Dr. A. J. Cook has announced that he will shortly resign from his position as State Horticultural Commissioner of California and take a much needed



Proliferation in white clover, or the extension of stem and the production of a second head of flowers above the first.—Photo by John H. Lovell.

# American Bee Journal

the house.

There are several associations now organized to help the apiarists. But among them we know of only one which is a positive success so far, "The Colorado Honey Producers." Their manner of organizing was described in the American Bee Journal for April, 1915, by their secretary, Mr. Rauchfuss, who may be called one of the most efficient men in our pursuit, for he is a practical beekeeper, an efficient salesman and a good manager. As Dr. Miller wrote, "A Frank Rauchfuss is not to be found growing on every tree." This is true. Yet in order to succeed in organizing the beekeepers of America in the manner in which the citrus growers are organized, it will take a "Rauchfuss" in each of many different districts of this immense country. When an organization is made, and in successful activity, in each of 20 or 30 honey-producing districts, cooperation between these will become an easy matter. They will then be able to send to some central meeting their most capable managers with clear understanding of what is needed.

Is this not plausible and do our friends see any other way to succeed?

We must not expect such a scheme to mature in one day, or even in one year. But if we are agreed that co-operation "from the bottom up" is likely to be a success, let us try to gather the stones that will wall the cellar upon which the structure is to be erected. Let each locality, where half a dozen producers or more can get together, organize a nucleus association, having in view the improvement of the market and the securing of supplies for its members. Each step must be taken with deliberation. None but careful, honest and industrious men must be selected to be entrusted with the interests of their members.

Since the greatest difficulties in the way of organization are caused by the isolation of the bulk of our producers, it is quite likely that many spots will remain unorganized for a long time. This should not deter those who are close together from associating. Thus far, little has been done but discuss points in apiary management at any of the local meetings. Let the question be widened to mutual help in honey selling.

Success for the beekeepers, in disposing of their product at remunerative prices, means success for the bee-magazines. It means also success for the queen-breeders, for the writers of bee-books, for the manufacturers of bee-material, for everybody who is in

any way connected with bees and their product. We should, therefore, all push together to get the band wagon out of the rut.

## The National Convention

The attendance at the National which met at Chicago Feb. 22-24, was fully up to expectations. Since the delegate plan of representation was adopted the attendance has never been up to former years. Only five States were represented by delegates: Minnesota, Michigan, Tennessee, Montana and Idaho. Neither Pres. Gates nor Sec. Foster was present, and there was serious talk of disbanding the organization. After much discussion it was decided to elect new officers and to reorganize on the old plan. During the coming year an effort will be made to eliminate the last of the objectionable features of the new organization, which is the representation by delegates. The Review has been sold to Editor Townsend, who will conduct the journal on his own responsibility. It should be greatly to the advantage of that publication to be separated from the National, owing to the differences that have developed. Mr. Townsend is a capable beekeeper of long experience, and it would seem that there is ample room for the present number of bee journals without conflict.

Prof. Francis Jager, of Minnesota, was elected president, Dr. Copenhaver, of Montana, vice-president, and F. E. Millen, of Michigan, secretary. A better selection of officers could not have

been made, in the opinion of the writer, who is himself one of the retiring officers. Prof. Jager is an exceedingly efficient and active educator. Mr. Millen has proven a very expert and diligent secretary in the Michigan Association, and Dr. Copenhaver is a new man who ably represents the far West. All three of them were in attendance.

Miss Emma Wilson was elected to membership in the board of directors. In order to eliminate all unnecessary machinery, the three executive officers were also elected directors. The present constitution provides for individual membership in the association whether or not a State association is affiliated. It was understood that at the next meeting the association would be placed on a basis which would give every member in attendance at the conventions full authority to vote on every question before the organization and that the activities of the organization in the future would be confined entirely to educational matters.

A resolution was adopted calling upon Congress to provide for extension work in beekeeping through the United States Department of Agriculture.

An interesting demonstration of the Ferguson uncapping machine was made by its inventor. After long periods of experiment this machine at last bids fair to be successful. By means of electric current or steam the instrument is kept warm, much like the steam knife is heated. Some adjustment to uneven combs is also possible. The writer, for the first time, feels that a practical uncapping machine is now within sight.

Among those present three aged men who have been closely associated with the organization and with the development of beekeeping for many years deserve especial mention. Each in turn was introduced to the audience and requested to say something. Dr. C. C. Miller, because of his prolific writings and unusual success is perhaps the most widely known living beekeeper. He was accorded a warm demonstration and listened to with marked attention. M. M. Baldrige is also well known, and told of his acquaintance with Langstroth and of the introduction of the Italian bee. F. Wilcox, of Wisconsin, was the third man of the trio.

It is to be hoped that the change of policy will enable the National to resume its old time interest, and that future conventions where all members enjoy equal privileges will be largely attended once more.

F. C. P.



FRANCIS JAGER, OF MINNESOTA,  
National Association President



## Honey Flora of New England

BY JOHN H. LOVELL.

(Photographs by the author.)

**N**OT so very long ago, as geologists reckon time, New England was covered with an immense sheet of ice thousands of feet in thickness. Slowly the great glacier moved seaward. The downward pressure was enormous—450 pounds to the square inch for every thousand feet of ice. The forests, the entire vegetation, even the soil was swept away. The underlying rocks were planed, furrowed, ground down, pulverized as by a huge millstone. There was visible only a barren sheet of ice and snow.

But at last the ice melted and the rivers were filled with floods and the valleys with great lakes. The new soil, composed of clay, sand, gravel and boulders, with large areas of barren ledges, was far from being propitious to a new growth of plants. Do you wonder that New England has a meager flora, or that its vegetation is starved and scanty? How widely different are the conditions in California, which was never covered with ice. Here the valleys and foot-hills display a multitude of beautiful and varied flowers with more species than are to be found elsewhere in this country in an equal area.

□ As a result of the glacial period New England contains comparatively few honey plants. Most of the honey is stored from white clover and the goldenrod, although in special localities sumac, fruit bloom, tobacco and other species rise to local importance. The majority of the apiaries are of small size, averaging from four to six colonies, although in favored sections 100, or a larger number have been reported. According to the census of 1910, there was during the preceeding ten years a

large decrease both in the number of beekeepers and colonies. Certainly any one would hesitate to attempt to gain, by present methods, a livelihood from bees in New England.

No serious attempt has yet been made to list the honey plants, and the honey flora is totally ignored by most beekeepers. In the case of the little bee-yards, managed largely on "the let-alone" plan, it probably does not make much difference whether it is well known or not. If, however, it was desired to establish outapiaries a thorough knowledge of the species valuable to the beekeeper would be indispensable in order to select the best locations. With the exception of the standard honey plants the crudest notions are current as to what yields nectar and what does not, and bumblebee flowers, pollen flowers, wind-pollinated flowers, and flowers with minute quantities of nectar, are not infrequently believed to be highly beneficial.

In New England there is no spring, and cold raw days continue up to the middle or last of May, when in a warm season summer makes a sudden advent. The first pollen in quantity is offered by the nectarless alder (*Alnus incana*), one of the commonest (Fig. 1) shrubs, blooming the last of March or early in April. In sheltered ravines I have seen large numbers of honeybees (the only bees then on the wing) gathering the pollen; and in Maine they are fortunate if their labors are not interrupted by a snow storm. Like the alder, the elm, hazel-nut, hickory, oak, etc., are wind-pollinated, and are at times visited by bees for pollen.

But the procession of the honey plants actually begins with the blooming of the willows. There are many species, rich both in pollen and nectar while a month is covered by the succession of bloom. Among the more noteworthy are the pussy willow, the river-bank willow, and several introduced trees, as *Salix alba*. Great companies of wild bees also resort to the willows and carry away a large share of the flower food. I have never heard of a surplus of honey being obtained from the willows in New England; but they are most helpful in tiding over the inclement spring.

The early herbaceous flowers, as the anemones, bluets, violets, etc., are in part wholly nectarless, or in part yield very little nectar. The rare round-leaved yellow violet is attractive to bees, but it is an unusual event to see a bee on a blue violet. Most of the seed of the latter is produced by closed flowers, near the roots, which never open. Whole fields are colored yellow by the dandelion. To my bees it is of more value for pollen than for nectar; but Mr. J. E. Crane, of Middlebury, Vt., writes me that he has had the brood-chambers filled with dandelion honey and that later it was carried above into the supers. It is a dark amber and, well ripened, has not an unpleasant taste suggestive of the flowers.

Both the red or swamp maple and the rock maple yield considerable nectar and are visited by many insects. Large groves of the rock maple occur in Vermont. The red maple has the stamens (Fig. 2) and pistils (Fig. 3) on different trees, and is, I should say, rather the better honey plant of the

two. Outside of the fruit trees there are few other trees in New England which are of much value to the beekeeper. The basswood is no longer abundant, and neither is the locust, a short lived tree, attacked by borers. The horse chestnut is a bumblebee flower, and the chestnut is wind-pollinated.

Fruit bloom is a somewhat indefinite term, but I shall use it to include all plants producing edible fruits whether trees or herbs, wild or cultivated. Honey bees visit the apple and pear in large numbers, and are often common when no other insects are visible. Their value as pollinators is beyond calculation, for many apples, pears, plums and cherries are wholly or par-



FIG. 2—Red or swamp maple (*Acer rubrum* L.). Staminate flowers; the numerous stamens are clearly shown; the flowers yield nectar and are sweet scented. The flowers appear before the leaves, which indicates that earlier in the history of the species they were wind-pollinated.



FIG. 1—Common hoary alder (*Alnus incana* (L.) Moench). The alder is the earliest common source of pollen in New England. The flower-buds are formed the preceding season and open long before the leaves have appeared. The flowers are wind-pollinated and nectarless.

tially self-sterile. The pear seems to secrete more nectar than the apple; it accumulates in the cup-like receptacle, and in favorable weather is said to overflow and drop to the ground. The plums, especially the Japanese plums, which produce their flowers in immense profusion, are much more frequently visited by solitary bees of the genera *Andrena* and *Halictus* than by honeybees. They contain little nectar. The wild choke cherry is very attractive to insects, and I have seen clouds hovering about the bushes. The raspberry is an excellent honey plant, but the blackberry is of little importance. There is not much nectar in the flowers of the latter, and honeybees do not visit them in large numbers, and when present are usually seeking pollen. For every honeybee there are ten wild bees, and the latter may be easily collected by



# American Bee Journal

the hundred as I know from personal experience. The elderberries are pollen flowers, and are absolutely devoid of nectar; they are visited mostly by flies, and a honeybee might properly be called by an Irishman a *rara avis*. The gooseberries, currants, blueberries and cranberries all yield nectar, and frequently attract honeybees. The gooseberries and currants produce little fruit in the absence of insects. The strawberries tend to have the stamens and pistils in different flowers; the pistillate flowers are of necessity dependent on insects for pollination, while



FIG. 3—Red swamp maple (*Acer rubrum* L.). Pistillate flowers; the stamens and pistils are borne on different trees, but both kinds of flowers secrete nectar.

many perfect plants are partly or wholly self-sterile.

Since the cucumbers, squashes, melons, etc., have the stamens and pistils in different flowers and the nectar more or less deeply concealed, four words cover the condition—no bees, no fruit. Among the plants producing edible fruits cross-pollination is the rule, many varieties are self-sterile and nearly all are benefited by cross-pollination, pollen from other varieties of the same species being prepotent over own pollen or pollen from the same variety. The structure of the pollen is such that it cannot be carried by the wind.

The early honey flow in New England comes from the clovers, chiefly white and alsike. According to my experience the flow from white clover is very dependable, but the flight of the bees may be greatly hindered by rainy weather, as during the season of

1915. Buckwheat is planted on so small a scale as to be negligible, except perhaps in special instances. Many of the mint family are good bee flowers, but they are seldom abundant. Milkweed, according to Gates, is an important honey plant in Berkshire Co., Mass. The columbines, Tartarian honeysuckle, red clover and gentians are bumblebee flowers. Mustard is common in grain fields; in California, Mendleson states that one year one of his hives gathered exclusively from mustard.

The sumacs occur throughout New England and in certain sections, as the hillside pastures of Connecticut, sometimes afford the beekeeper a startling surprise. The flowers appear in July, and on hot days the nectar flows very freely. Allen Latham says that a strong colony has no trouble in gaining 20 pounds or more in a typical day. In good seasons his colonies store from 40 to 100 pounds each. The honey is a bright yellow color, and has at first a bitter taste, which disappears when it has ripened. He adds that it is safe to say that much of Connecticut would be worthless to beekeepers but for this plant (*Rhus glabra*). The stamens and pistils are on different plants; the staminate flowers are white and the pistillate green.

According to E. H. Shattuck there are thousands of acres in Connecticut devoted to tobacco culture. Tobacco plants were formerly "topped" or cut back, but they are now permitted to bloom and produce myriads of flowers from Aug. 1 to late in September. The bees visit the flowers very eagerly, and a surplus of a hundred pounds to a colony may be obtained. The honey is dark or brownish, but is without a rank odor or taste, and is comparable to buckwheat honey. Where tobacco is raised under cloth it is less accessible than in the open, but there are always numerous openings through which the bees can pass. In August there are in this State few other honey plants in bloom. Apiaries seldom exceed 25 colonies.

In Massachusetts, Gates says that the sweet pepper bush (*Clethra alnifolia*) yields a fair surplus of light colored honey. It is abundant along the eastern coast. Another shrub widely distributed in New England, and a great favorite of insects is the New Jersey tea (*Ceanothus americanus*). Banks has listed 382 visitors (bugs, flies, beetles, wasps and bees) taken on *Ceanothus* in Virginia, a larger number than has been taken on any other American flower, and I believe, on any other flower in the world.

In pastures throughout New England lambkill (*Kalmia angustifolia*) (Fig. 4) is common, and in western Massachusetts I have seen a hillside covered with mountain laurel (*K. latifolia*). Honey obtained from the flowers of these plants is very commonly believed to be poisonous, but apparently on very insufficient evidence. These shrubs are abundant over large areas, and in the mountains of Carolina the mountain laurel often presents an unbroken sheet of bloom. If the honey were deleterious frequent reports of illness might be expected, but nothing of the sort happens. Kalm, the Swedish trav-

eler, after whom the genus *Kalmia* is named, says that if domestic animals eat the leaves they fall sick or die, but that they are harmless to wild animals. The belief that the leaves are poisonous seems to have extended to the honey. But Dr. Bigelow states in his Medical Botany that he repeatedly chewed and swallowed a green leaf of the largest size, without perceiving the least effect in consequence. A powder made from leaves recently dried in doses of from 10 to 20 grains produced no perceptible effect. The taste of the leaves is perfectly mild and mucilaginous. Dr. Bigelow was inclined to believe that the noxious effect of the leaves on young domestic animals was due to their indigestible quality. The probability is that the honey is perfectly harmless; the matter should be tested, using, of course, proper caution.

It would seem far more probable that the poison ivy (*Rhus toxicodendron*) and poison dogwood (*Rhus vernix*), both common shrubs in New England, would yield poisonous honey; but so good an authority as Dr. Miller tells us that the honey is excellent and has nothing poisonous about it.

If I were compelled to stake the existence of bee-culture in New England on a single genus of plants I should select the goldenrods. There are many species, and they all yield nectar and pollen. They begin to bloom in mid-summer and continue to bloom in October. They are very common, and there are species adapted to the seashore, the fields, the rocks and the woods. I have never known the flow of nectar to fail, and a great quantity

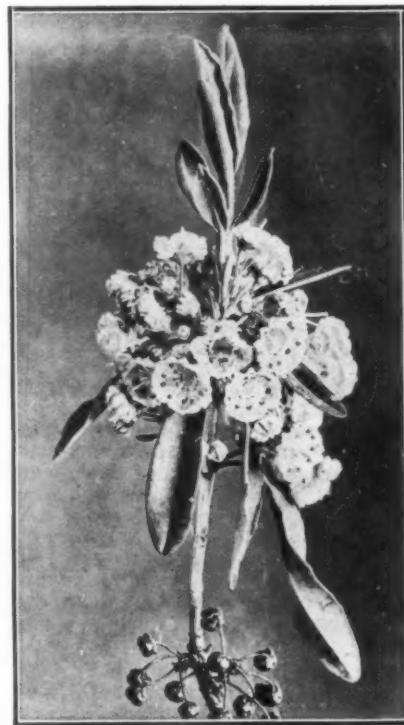


FIG. 4—Sheep laurel or lambkill (*Kalmia angustifolia* L.). Bee flowers; the anthers are held in little pouches in the corolla and the filaments are elastic. A bee in moving around on a flower strikes the stamens, setting free the anthers, which fly quickly upward, throwing the pollen on the body of the insect.

# American Bee Journal

of a heavy yellow honey is stored annually. Honeybees show a preference for *Solidago lanceolata*, or according to the 7th edition of Gray's Manual *S. graminifolia*.

The asters are freely visited by bees, but they are not common enough to vie with the goldenrods, neither do they secrete nectar as freely. Properly ripened and sealed aster honey is an excellent winter food, as scores of beekeepers can testify; but if it is gathered so late that it has not time to ripen and is left unsealed it will very likely deteriorate and prove injurious. But I have lost a colony of bees by feeding sugar syrup very late in the fall. It has been suggested that perhaps different species of aster yield very different kinds of honey, but there are no grounds for such a supposition, on the contrary they are much alike just as in the case of the goldenrods.



FIG. 5.—Purple vetch. Violet-purple bee flowers, common in worn-out fields. The structure of the flower is similar to that of the garden pea. The pollen is placed on the under side of the bee's body. After pollination the flowers bend downward and turn a dark purple.

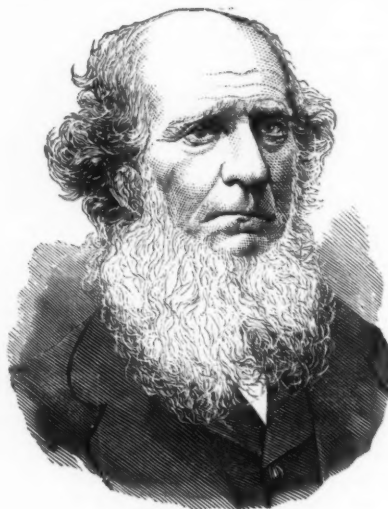
There are many other flowers besides those enumerated, which are more or less helpful to the beekeeper, as the fireweed, thistle, Spanish-needles, thoroughwort and many bee flowers belonging to the pea, mint and figwort families (Fig. 5), but the more important honey plants are believed to have been mentioned. The most promising method of improving the honey flora would seem to be the more general introduction of white sweet clover.

Waldoboro, Maine.

## New England Beekeepers

BY I. E. CRANE.

**L**YONSVILLE, MASS., is a place of unusual interest to New England beekeepers, for here lived the elder Wm. W. Cary some 70 years ago, already an enterprising beekeeper, and here his son W. W. Cary, Jr., still lives. It was here that Rev. L. L. Langstroth,



WM. W. CARY, SR.

more than 60 years ago, full of ideas and enthusiasm, came to consult the elder Cary as to the value of a movable-comb hive, and doubtless to construct it in his workshop. Certain it is that here the movable-frame Langstroth hive was first used, and the exact spot where it sat is still shown to those interested.

Wm. W. Cary, Sr., went to Flushing, Long Island, in 1860, to care for the first successful importation of Italian bees by Mr. Parsons. A few years later I visited Lyonsville, then known as Coleraine, hoping to meet Mr. Cary, but much to my disappointment he was absent from home. I met, however, his son, then a young man and as enthusiastic over bees as I was, and we "talked bees" until I suspect every one about the premises was disgusted. He showed me some of their choicest queens and told me of their honey resources, so different from my own. He told me of trying to have a colony of

very cross bees and getting stung so severely as to become nearly unconscious, but after an hour or two was able to go at them again and conquer them, after which he was immune to bee poison.

Two or three years ago, at the request of Earl M. Nichols, a son-in-law, I again visited the old place, and found the house and grounds of 50 years ago greatly enlarged and improved, the better to harmonize with Mr. Cary's large heart and hospitable nature. The old cider mill has become an immense vinegar manufacturing plant, one of the largest and most successful in the country.

The rearing of queens and the supply business was looked after by Mr. Nichols, while Mr. Cary was as enthusiastic over fruit growing as he had formerly been over beekeeping or queen-rearing. The thorough manner in which he was preparing the soil for a prospective orchard accounted for much of his success as a business man.

To my mind there is no beekeeper in New England in whom I am more interested than Allen Latham, of Norwichtown, Conn., for many years president of the Connecticut Beekeepers' Association, and to whose efforts much of the prosperity of that institution is due. Of a scientific turn and decidedly original, he rarely follows the beaten road of the crowd, but instead has worked out a method of beekeeping suited to his own needs and surroundings.

Being confined much of the time by his profession as a teacher, he persuades his bees to give up the old and popular way of increase by swarming and to work on contentedly in his "let-alone hive." The surplus he removes at his leisure in midsummer or perhaps not until the Christmas vacation. He makes his increase in small nucleus hives, often wintering them in these same small hives on an amount of honey that is almost unbelievable. He has a



LANGSTROTH

# American Bee Journal

vacation camp on Cape Cod, where there is supposed to be little but a succession of sand dunes, and of course he keeps there a few hives of bees for his amusement, which pay tribute to his skill with a small amount of surplus. He is a typical Yankee. You should visit his garden in late summer. It reminds one of another garden described by a very ancient historian as a place where the Lord "made to grow every tree that is pleasant to the sight and good for food;" only Mr. Latham's garden contains a bewildering profusion of vegetables as well as trees bearing fruit. Better than garden, and better than success in beekeeping, Mr. Latham has a most charming family and delightful home.

Some 30 or 35 years ago Mr. A. E. Manum, of Bristol, Vt., was one of the most pushing and enterprising beekeepers in New England. In addition to a large stock of bees he did quite a business in manufacturing hives and other supplies for beekeepers. There came a particularly good season when basswood gave an unusual flow, and he secured 35,000 or 40,000 pounds of choice section honey. He reasoned that if he could produce such a crop with the stock he then had he could with a much larger stock secure in a few years a fortune, so he began to increase his yards rapidly without much regard to the seasons.

Meanwhile the lumbermen were busy cutting down the basswood for lumber, and by the time he had seven or eight hundred colonies his bee-pasture was ruined and his large stock of bees literally ate him out of house and home. His stock dwindled until he lost interest in them, and before he left for California some years ago his last colony was dead. Mr. Manum was very hos-



ALLEN LATHAM

pitable, and many are the enjoyable chats or visits I have had with him.

He had a rather unusual command of language for one with no greater advantage of education than he had enjoyed. He was of French extraction, and in learning English he seemed to choose his adjectives with unusual care, more so by far than the average person born of English-speaking parents. His swarm-catcher, invented and introduced by him is, I believe, still listed in the catalogs of our large supply houses.

New England as a whole is not an ideal section for beekeeping. This is especially true of Massachusetts. Yet Prof. Burton N. Gates is doing a great work for that State. The Agricultural College at Amherst was, I believe,

through the influence of Prof. Gates, the first in the country to give a complete course in beekeeping, with an apiary and a building for laboratory work.

My acquaintance with Prof. Gates has been exceedingly pleasant. He is greatly interested in the uplift of beekeeping, not only in Massachusetts but through the length and breadth of our country.

There are few persons, perhaps, in New England who have spent more time in the careful first hand study of bees than Arthur C. Miller, of Providence, R. I. Confined as he is to his office as a bank cashier much of the day, we can imagine the pleasure he takes with the bees during his leisure hours. He holds a facile pen, and is, when he has the time, a charming writer. While we do not agree with all his conclusions, I count it one of my misfortunes that I have not had the opportunity to become better acquainted with him.

Henry Alley, now deceased, of Wen-



J. E. CRANE

ham, Mass., was for many years an extensive queen-breeder. My acquaintance with him was slight. I do not think he tried to produce honey to any great extent, but confined his efforts to rearing queens. His contributions to bee journals were read with interest. For a number of years he edited the *Apiculturist*.

Mr. A. W. Yates, of Hartford, Conn., for many years secretary of the Connecticut Beekeepers' Association, is a man of splendid physique and push, and to him perhaps more than any one else are due the wonderful bee and honey exhibits at the Charter Oak Fair, as he has been the superintendent of the exhibit for a number of years.

He is in business in the city of Hartford, yet he finds time to care for two



ARTHUR C. MILLER OF RHODE ISLAND



# American Bee Journal

or three yards of bees besides inspection work and the rearing of Italian queens, for which he finds a good demand. He rears his queens from imported stock, believing such to be more satisfactory than queens reared from American mothers.

Mr. Yates, with Messrs. Latham, Coley and Rockwood have, I believe, been the largest exhibitors at the Charter Oak Fair and carried off the largest number of prizes in recent years.

If there is anything I admire in a beekeeper it is the ability to think for himself. Such a beekeeper is Mr. A. W. Darby, of Alburgh, Vt., the extreme northwest corner town of the State. Some years ago European foulbrood came down on him from Canada when much less was known about this disease than at present. Yard after yard among his neighbors with hundreds of colonies were wiped out while he carefully studied it, finding its weakest points, and has practically overcome it and succeeded in securing good crops in spite of it. One of his methods of fighting this disease is never to use a queen reared in a hive where the disease exists as colonies with such queen are sure to prove very susceptible to disease. Another is to rear queens for his use from resistant strains of Italian bees. And yet another is to keep his colonies strong, which he has been pretty successful in doing.

Mr. Darby has worked out methods adapted to his location, and has been producing chunk honey and selling it successfully. One can hardly visit him without getting some new ideas worth carrying away with him.

Mr. E. Clinton Britton, of Canton, Mass., for a number of years president of the Massachusetts Beekeepers' Association, has been very successful in wintering large colonies of bees in his attic, from which he has secured crops of honey from early bloom that have surprised those accustomed only to small colonies wintered in the usual way. He has found and proved quite conclusively that if a colony has the strength it can secure a large amount of honey from fruit bloom.

Mr. Geo. C. Spencer, of Addison, Vt., president of the Vermont Beekeepers' Association, is an extensive farmer in addition to his large yard of bees. A few years ago I found his yard of 100 colonies in bad shape from European foulbrood. Scarcely a healthy colony in the whole lot. He is now on top, and he told me some time since that he found but one colony afflicted with this disease the past summer. This for the encouragement of others who are getting their first taste of it.

R. H. Holmes, of Shoreham, Vt., has been a very successful beekeeper, and has carried off many of the prizes on honey offered by the New England Fair Association. He keeps his shop and honey rooms the tidiest and neatest of any beekeeper I have ever visited. He stores his honey up under a hot roof to ripen before cleaning the sections for market, a most admirable practice as it greatly improves the quality.

Mr. M. F. Cram, of West Brookfield, Vt., living at the geographical center of the State, at an elevation of 2000 feet above sea level, where the seasons are too short to grow corn, has had good

success with bees, his main crop being raspberry, with a good early yield of maple and dogberry honey. He was for some years president of the Vermont Beekeepers' Association.

Mr. Chas. A. Monroe, a mail agent on the railroad between Albany, N. Y., and Burlington, Vt., while not a large beekeeper is a good one and has succeeded in keeping his yard free from diseases, while all around him yards were going down with European foulbrood. His home is in South Shaftsbury, Vt. His method is to keep only very strong colonies.

Much of the success of our Vermont beekeepers' associations has been due to men like Dr. Frank Bond, of Cornwall, Vt., H. L. Leonard, of Brandon, Vt., G. W. Larabee, of Shoreham, Vt., and others like them.

There are many other most excellent beekeepers in New England if there were room to speak of them.

Middlebury, Vt.

## Dean of New England Beekeepers

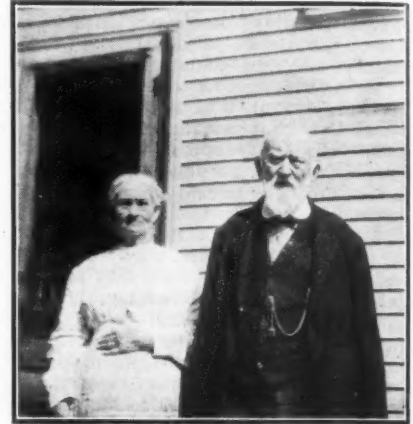
BY BENAJMIN P. SANDS.

I WANT to tell a little about Mr. Joseph H. Chase, our dear old man of Massachusetts, a charter member of the Eastern Massachusetts Society of Beekeepers, organized under the name of the Massachusetts Society of Beekeepers in March, 1906.

Mr. Chase was born in Salem, in our State, received his education in the public schools, learned the trade of cabinet maker, and for many years followed the craft. He has always been interested in fruit, flowers, and bees, has been a beekeeper for 66 years, and has, for the last 40 years, given his entire time to the nursery business and rearing of bees, on his beautiful estate, comprising five acres, on Mt. Vernon Street, in Malden, one of our beautiful suburban cities.

Mr. Chase will be 90 years of age on April 19, is a very much respected citizen, hale and hearty, reads without glasses, attends to his daily work, and his place is kept up to a standard of excellence which is admirable.

He attends regularly our winter meet-



JOSEPH H. CHASE AND WIFE.

ings which are held the first Saturday afternoon of every month, and always has some new idea of interest for our members, and is a well-known figure at all New England Field Days.

He is the father of six children, five of whom are living. The youngest, Mr. I. N. Chase, 50 years of age, is the proprietor of one of the largest lumber concerns in our city.

Mr. Chase is easily the Dean of New England beekeepers, and our society has arranged to visit him in a body at his home on his coming birthday.

Boston, Mass.

## New England Beekeepers' Societies

MISS JOSEPHINE MORSE.

IN preparing this article I was greatly surprised to find that only four of the six New England States boasted beekeepers' societies. These four are Maine, Vermont, Massachusetts and Connecticut.

It would be strange if there were no association in Vermont, since that State probably produces more honey than the balance of New England. The Vermont Beekeepers' Association is the only organization in the State. It meets regularly once a year, and held its 41st annual convention in February.



EXHIBIT OF 25 VARIETIES OF GRAPES RAISED BY JOSEPH H. CHASE

# American Bee Journal

Mr. G. C. Spencer, of Vergennes, is president, and J. E. Crane, of Middlebury, secretary and treasurer. The membership of 40 is but a small proportion of the honey producers of the State. Mr. J. E. Crane tells me that in Addison county alone there are over 3000 colonies of bees.

If Vermont has more bees and produces more honey than the rest of New England, Massachusetts produces more beekeepers' societies. There are six associations flourishing in the old Bay State. The oldest of these is the Worcester County Beekeepers' Association, organized April 14, 1900—the membership then being about 25 beekeepers—all from Worcester county, in accordance with a by-law in the constitution which limited the membership to those residing in the county. This has since been changed and amended so that any one anywhere who is interested in bees can become a member.

In the early days of the association things were "doing" every minute. Meetings were held every month in the year, during the summer at different beekeepers' homes. Sometimes there were as many as 500 present. Also there was the annual banquet supper,

by the attendance and general spirit of the affairs (to say nothing of strong personal feelings on the subject), *No!*

We go with basket lunches in hand, prepared for pleasure and a real bee-orgy. We meet in some beekeeper's apiary with free opportunity to inspect the owner's pet inventions and contrivances and talk them over. When the inner man begins to demand satisfaction, we sit down on the ground in sociable little groups to eat hard-boiled eggs and ham sandwiches. Usually hot coffee is served, and, *sometimes*, hot biscuits and honey.

Then comes the afternoon program with interesting addresses by men of marked ability. We finally return home, hot and tired, yet wholly satisfied. One of the pictures illustrating this article is of the Field Day held by the Eastern Massachusetts Society of Beekeepers at the home of Mrs. Susan M. Howard, of Stoneham, Mass., in July, 1912. The apiary, as may be seen, was surrounded with buckwheat, at that time in full flower and a beautiful sight. The bees were fairly roaring in it all the morning. Mrs. Howard is shown transferring a colony from an old box-hive into a modern movable-frame hive.

The Eastern Massachusetts Society

bee, of North Andover, is now president, and Philip S. Crichton, of Boston, secretary and treasurer. They hold meetings the third Saturday in the month in Ford Hall, Boston.

If we look at the map we will see that the beekeepers' societies are very well distributed throughout Massachusetts. Every section of the State, except the Cape and the very southeasternmost part, has its own representative society. The Eastern Massachusetts takes care of the district for quite a way north, south and west of Boston, the German Beekeepers' Club in the northeastern corner is active, the Worcester County Association looks after the wide central strip, the Hampshire, Hampden, Franklin Association, the west central and the Berkshire County Association, all that fine beekeeping country in the extreme western part of the State. So the Massachusetts beekeepers are well looked after, and no one need travel far without finding some organized body of men and women interested in the honeybee.

Two very prominent apicultural authorities, Mr. John L. Byard and Burton N. Gates, Ph.D., of Amherst, are president and secretary respectively of an organization whose official name is the State Beekeepers' Association of Massachusetts, lately formed for the purpose of affiliating the various local societies of the State, its members being delegates from the different State Associations. Its object is not only to bind these societies together but to act as a medium of exchange and cooperation among them.

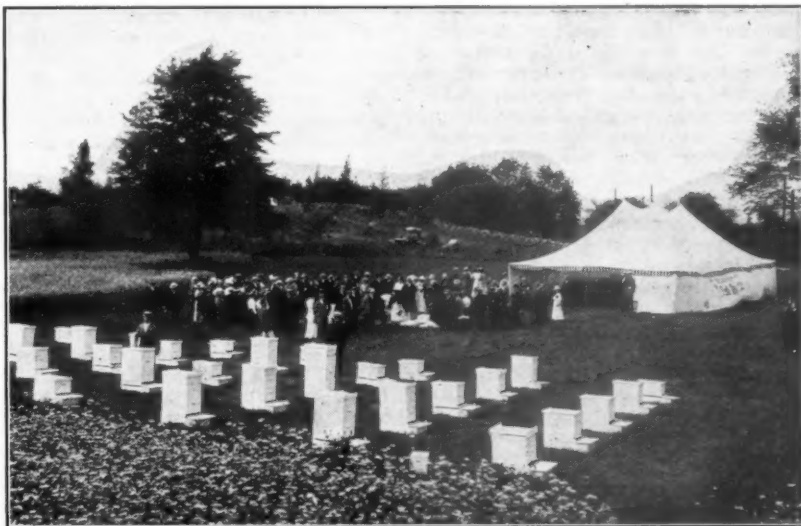
In Lawrence the German beekeepers have formed into a club, the German Society for the Cultivation of Honey Bees, with Mr. John Uller, of Lawrence, as president, and Mr. Paul Loeffler, of Methuen, secretary and treasurer. A picture of one of their gatherings is printed herewith.

The Hampshire, Hampden, Franklin Beekeepers' Association, organized in 1909, is and has been a thriving society. An annual meeting is held and other meetings periodically at the discretion of the executive committee. The membership has never been large (56 at present), but it is not inactive by any means, and there has always been a surplus in the treasury. The officers elected at the last annual meeting are: President, O. M. Smith, of Florence; secretary and treasurer, Burton N. Gates, of Amherst.

The Berkshire County Beekeepers' Association is presided over by Mr. C. M. Musgrove, of Pittsfield. Mr. John Buckler, also of Pittsfield, is secretary and treasurer.

There is one small organization in Maine, the Aroostook Beekeepers' Association, of which C. I. Spaulding, of Perham, is president, and O. B. Griffin, of Caribou, secretary. As yet there is no State wide organization in Maine.

In Connecticut there seems to be a very wide-awake spirit among the beekeepers, and their society accordingly is very active. The present membership of the Connecticut Beekeepers' Association is 155, and growing. Sherman E. Bunnell, of Winsted, is president, and L. Wayne Adams, of Hartford, secretary and treasurer. Through the efforts of this body one of the best foulbrood laws in the United States,



EASTERN MASSACHUSETTS FIELD DAY

always well attended. The society has held three exhibitions in Horticultural Hall, Worcester, devoted entirely to bees, honey, and all that pertains to bee-culture; claimed to be the only such exhibitions ever held in the United States devoted entirely to this subject and not connected with any other exhibition or fair. This association was first to record resolutions in favor of the present very important apiary inspector law. They went on record a year ago in favor of an increase in the appropriation for inspection made by the legislature. At the present time there are 90 listed members. President, O. F. Fuller, Blackstone; secretary and treasury, J. S. Whittemore, Leicester. Meetings are held monthly during the winter with a Field Day in the summer.

And speaking of Field Days! Would any beekeeper ever miss one if it was humanly possible to get to it? Judging

of Beekeepers was originally organized in 1914 as the Massachusetts Apicultural Society. In 1906 the society reformed as the Massachusetts Society of Beekeepers. In 1913, at the request of the State Inspector of apiaries, the name was changed by unanimous vote of the 70 members present to the Eastern Massachusetts Society of Beekeepers. There are rumors that the name may be changed once more at the March meeting. There are over 100 members who hold seven meetings during the winter, with a fine list of speakers. Thos. J. Hawkins, of Everett, is president, and Benjamin P. Sands, of Brookline, secretary and treasurer. The aim of the society is to solve the problems presented by the members, which it endeavors faithfully to do.

The Massachusetts Society of Beekeepers is an offshoot of the Eastern Massachusetts Society, and was organized May 23, 1914. Frank W. Fris-



# American Bee Journal

carrying with it an appropriation for inspection work was passed by the 1913 legislature.

In 1915, they secured the installation of an apiary at the Connecticut Agricultural College. The importance of the beekeeping industry is increasing as fruit growers are recognizing the pollination value of the honeybee. All those who have attended the Connecticut Fair at Charter Oak, Hartford, during the last seven years, and have seen the beautiful exhibit of bees and honey displayed by members of the Connecticut Beekeepers' Association have been filled with admiration and—if fellow beekeepers—with pride. Very liberal premiums (\$500) have helped to make this the finest exhibit in the country. Since its beginning the Association has been steadily fulfilling the purpose for which it was created, namely, "The promotion of scientific bee-culture by forming a strong bond of union among beekeepers."

I wish to repeat those words, "a strong bond of union among beekeepers," so they will stay in the reader's mind. For I could not help recalling them when I received a letter from a successful New Hampshire beekeeper to whom I was referred for information. He spoke first of their being no bee societies, then of the decrease of 50 percent in the number of colonies kept on account of "old methods of caring for them, giving foulbrood a chance to deplete and destroy, also lack of State inspection and instruction." The State, as he says, should show more interest and give more aid, but where will you ever find a State which will give interest and aid without being forcefully urged, and a strong desire shown and demand made by organized bodies? Here, certainly, "a strong bond of union among beekeepers" will help to impress the solons of the State with the economic importance of beekeeping interests. The beekeepers cannot lie back and do nothing and expect plums to fall in their laps.

As yet the beekeepers have not co-

operated to any extent in Maine, New Hampshire or Rhode Island. Those sufficiently interested in bees to wish to hear more, are obliged to go out of the State to do so. This seems a pity, for there must be plenty of "home talent," if only some one was energetic enough to discover it and start things going. It often takes us New Englanders a long while to get started, but we can anticipate a time when the beekeeping societies of Maine, New Hampshire, and Rhode Island will vie with those of the other New England States.

South Lancaster, Mass.

## New England Honey and Honey Markets

BY ALLEN LATHAM.

**N**EW ENGLAND has possibly a larger variety of honeys than any equal area anywhere else in the United States. This fact is due to the varied soil and climatic conditions in these New England States.

Any white honey is clover honey to the average grocer and buyer in New England (note that I do not say consumer), but New England has several kinds that I should class as white honeys. Clover needs no description here nor does basswood. Both of these honeys we have, also raspberry which is so commonly blended with clover, with us, that few people know one from the other. Then we have clethra, a very white honey, but of rather marked flavor; only a few localities abounding in swamp ground have this latter source of honey.

Our asters produce a very light-colored honey, but like the clethra it has so marked a flavor that only a comparatively few people like it. Some goldenrods produce an almost white honey scarcely to be distinguished from aster honey. The writer believes that sumac honey should be classed as white, for it surely is not amber. This

honey probably is in its perfection in southern New England, and it has no superior. It is straw colored, heavy, never candies, is of mild flavor, and meets with keen demand in the market. In a few localities surplus is gathered occasionally from apple bloom. This is also to be classed white, being about the color of pure raspberry honey. Its quality is unsurpassed, but so little gets into the markets that it is negligible.

There are other sources which yield white or very light honeys, but of too slight importance to mention here.

Of our amber honeys, that from blueberry and huckleberry is the most important. This comes late in May and early June. The flow, from one to two weeks, usually about ten days, is rather profuse, and if colonies are full strength from 60 to 100 pounds may be put in. These plants abound in many parts of New England, and but for them beekeeping could not be carried on at all in some localities. Among the swampy regions along the coast, in the drumlin region 30 and 40 miles inland, and over pretty much all the hilly and mountainous parts of New England, this honey plays an important part in our industry.

Blackberry bloom also yields, I believe, an amber honey which is so similar to that just described that the two are scarcely to be distinguished. In some localities the honey from goldenrod is amber, and is so poor in quality that it is worthless for table use. Other sources of amber honey are negligible so far as my knowledge goes.

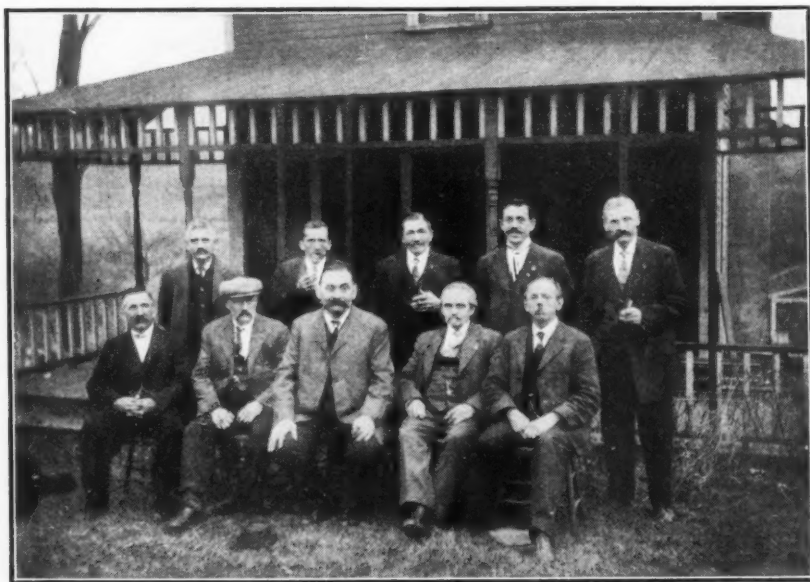
Buckwheat is grown somewhat in New England, and once in several years yields a bumper crop. I have kept bees over 30 years and can count one big crop from buckwheat. This honey, of course, is beyond the amber shade.

We not infrequently, altogether too frequently, have a flow of honeydew. This is usually a very dark rank honey (?) which can be used by the bakers, but had better be used for spring feeding.

There are, to be sure, many other honeys, but most of them are not well enough known to the writer to speak with assurance of their quality and value. They come blended with the more abundant honeys, occasionally adding value to the eating qualities of the product, but not infrequently injuring it by giving it an off flavor or poor color. One alone I will mention because it does, on occasion, greatly injure a honey crop. In many sections of New England, during the second week of July the bees, for a few days, enjoy a profuse flow of honey. It is yellow, of fine body, but so bitter that it is inedible for months. If kept until well into the winter the bitterness mostly works out and the honey is then rich and palatable.

The New England market calls for more honey than is produced locally. Hence, much honey is imported, especially from the West. Several carloads of California honey go into Boston every year, besides much honey from elsewhere. Almost all of this honey is used by bakers and confectioners, but a great deal is bottled.

The honey taste in New England is very varied. In the country towns and



THE GERMAN BEEKEEPERS' CLUB



# American Bee Journal

villages only native honeys are easily sold, though bottled honeys, if mild in flavor, sell fairly well. Alfalfa comb honey, white sage comb honey, and even comb honeys from Illinois and New York State do not sell well in the smaller towns of New England. The comb honey of New England is more often than not a blended honey and any foreign honey fails to taste right. Nearly all people buy comb honey for the enjoyment of eating it. If it does not taste as it did "at grandfather's" then it is not pure.

In our manufacturing towns the vast population of foreign born, not knowing the taste of New England honey, buy the western honeys if the retail price is not too high. From these facts I reason that New England is not a good market into which to ship comb honey, but excellent for extracted honey. In this locality, this very winter, Connecticut comb honey brought a dollar more per case than western honey. The grocers preferred to pay the difference rather than load up with a honey which they might have to carry on their hands until they finally sold it at less than cost.

New England doubtless has flowers which yield enough nectar to produce honey enough for all her markets. Unfortunately the business of honey production is too precarious to encourage many to go into it on a large scale. There are rare localities where more than 50 pounds per colony can be counted on. The weather conditions which prevail in New England are most uncertain. Almost every honey flow is doomed to be broken into several pieces by storms of uncertain duration, and there are few years when one does not have to feed more or less for winter.

Norwich to a n, Conn.

## Advertising at New England Fairs

BY A. W. YATES.

FOR the purpose of advertising honey and its uses, stimulating a larger consumption and creating that favorable impression necessary to its universal use, what better method can be employed than bee and honey exhibits at fairs? Since honey is used much more freely during cold weather, fall is the proper time to do this advertising. Almost all fair associations are willing to allow exhibitors the privilege of selling at the same time, so long as they do not impair their display. Thus the exhibitor is more or less repaid for time and expense incurred and his advertising will be gratis. As an exhibitor, at the Hartford fair since its inception, I have found this method of advertising of no small advantage, assisting in the disposal of about 8000 pounds of honey this season and a considerable number of bees and queens. Being much more interested in the rearing of choice bees and queens than in honey production, my energy is expended largely in that direction, and I know a great many spring orders can be attributed to this source.

As superintendent of this department for the past seven years, I find that it

requires a good deal of time, energy, and enthusiasm to keep it up to its high standard, but when the time arrives and everything is set up and in order, and we hear visitors saying, "This is the prettiest place on the grounds," I feel well repaid for the exertion.

We had about 12 tons of honey on exhibit, this past season, of different shades and quality, coming from all sections, of which probably three-fourths was extracted. This with some 40 or 50 colonies of bees in single frame observatory hives, representing different races, drew a crowd of interested sightseers, who were led to think, "How wondrous are His works!"

Several different exhibits of queen-rearing outfits, including cell-cups, cells in different stages under development and mating-hives, with large displays of hives and fixtures, were shown and their uses explained.

The culinary department received its share of attention. The cookies, gingersnaps, cakes, canned fruits and pickles, in which honey was used for sweetening had recipes attached that were copied by many and will encourage a more liberal use of honey in cooking.

Honey sandwiches, a roll with a slice of comb honey inserted, and honey phiz, a concoction of extracted honey, cream and carbonated water, were sold near the entrance of the building, where those passing were invited to try a sample at 5 cents. About 1200 sections, averaging eight sandwiches each, and between 200 and 300 pounds of extracted honey in the drink, were disposed of in this way.

Our building, which is 50x75 feet, is situated near the main entrance where about 150,000 people are obliged to pass in going to and from the grounds. Being occupied solely by "Bees and Honey," it is a distinctive feature of the fair. The large, open windows

provide plenty of light and air, and it is lighted at night with hundreds of electric lights and a large electric sign, "Bees and Honey."

But how do we get up such an exhibition as this? There must be some inducement or we could not get this large amount of bees and honey together. The premium list, which foots up to \$500 or a little more, is spread out into classes, with three liberal awards to each class, so that each exhibitor does his best to obtain one or more of these, and they long ago found out what the consequences would be if negligent in any way. The competition is very keen, but usually each gets something.

To defray the expenses of the fair committee, which are very light, an entrance fee of 25 cents in each class is imposed. This has thus far been more than sufficient, and the balance has been turned into the treasury of the association.

The largest award last fall, of \$153, which was received by the writer, was allotted on the following classes: 1st, Carniolan queen, queens in cages, queen rearing, display of honey, fixtures and sweepstakes. 2d, Golden queen, Caucasian queen, largest collection of different races, 10 sections, one case packed for market, and 24 jars of chunk honey.

Amounts of the awards were:

W. K. Rockwell, \$98; Allen Latham, \$51; H. W. Coley, \$33; C. H. Clark, \$39; J. T. Cullen, \$8; Wm. Ehouse, \$17; J. G. Griswold, \$39; A. G. Bristol, \$16; A. E. Crandall, \$6.

The balance of the \$500 was awarded to the ladies of the culinary department, and this year as before, whether it was the sweet in the articles themselves or in those that prepared them that influenced the judge in his decisions, I am unprepared to say, but when I noticed his light appetite at dinner afterwards I wondered whether it was



BEEKEEPING EXHIBITION HALL AT HARTFORD, CONN.

# American Bee Journal

mind or stomach trouble.

We have made a practice of changing judges each year, securing one that is a stranger to all if possible, and I think it pays, but those that understand this line of work thoroughly and will serve within the price limit are few. We are allowed \$25 for this purpose, to cover salary and expenses. Our judge this year was Wheeler D. Wright, of Altamont, N. Y.

The only restriction to entry into this department is that all must be members of the Connecticut Beekeepers' Association, the yearly dues of which are one dollar.

The educational features of such an exhibit, to the honey producer, are valuable; illustrating different styles of jars, manner of putting up, labels, cleanliness, clearness, and body of honey, methods employed for display, etc. Again, a whole week in the company of fellow workers engaged in the same God-given occupation, healthful because it is God-given, to exchange experiences, is better than a vacation taken in any other way.

Hartford, Conn.

## Some Things New England Has Done for the Bee World

BY ARTHUR C. MILLER.

**T**HE beekeepers of the rest of North America oft seem inclined to look upon those of New England and their business as of small consequence. Well, there is a lot of comfort in an ample stock of self complacency, but sometimes there is more benefit and profit in looking about and seeing what the other fellows have done and are doing.

It will jolt a lot of the boys to learn how much they are indebted to the beekeepers of little old New England. Here are a few of the things: The first importation of honeybees into the United States, the publication of the first half dozen American bee-books, the movable-comb hive (Langstroth's), the first real system of commercial queen-rearing (Alley's improvement of Quinby's), the baby nucleus and its accessories (Pratt), the sectional outer-case protected hive (Manum's), the hot plate foundation fastener, the steam heated uncapping knife and sundry systems of practice and management now so universal as to excite no curiosity as to their origin or development. There were also many things now obsolete which were the foundation for things now more or less indispensable.

It isn't always the country producing the most of anything that produces the best or gives a thing its fame. "Clover honey," the synonym for the "best," the honey by which all others are measured, got its fame in New England, and today the finest comes from New England and New York. The fame of clover honey was built on a natural blend of clover with a little raspberry, basswood and some of the mints, and it is from places giving that natural blend where the finest "clover honey" is produced today.

New England beekeepers have not only originated and developed apicultural things, but at sundry times have



YATES' EXHIBIT AT HARTFORD FAIR—Photo by Burton N. Gates

shown the fallacies of widely exploited plans and methods which were costing beekeepers a lot of money.

It does not follow from all the foregoing that the beekeepers of New England have been superior to those of the rest of the country, but that possibly their environment, their closer touch with manufactures, with commerce and more time and facility for study and experiment gave them a broader knowledge and a better perspective than some of their fellows in other sections.

Times have changed, and today other sections of the country are challenging each other as well as New England in the race for progress. And it is well.

I recall, at this moment, the names of a few who have made a greater or lesser mark in the progress of apiculture. Most of them noted for real progress, a few for errors and black marks, but by those tokens arousing others to energy and advance. Of the following, but one is left in the bee-business, and all but two or three are dead:

Thomas, Thatcher, Smith, Packard, Langstroth, Hubbard, Russell, Freyer, Wakefield, Bigelow, the three Carys, Manum, Larrabee, Alley, Kidder, Cotton, Weeks, Mason, Davis Sweet, Pond, Jeffrey, True, Locke, Cushman, Pratt, and Chase, the latter, over 90 years old, still keeps bees and attends the bee-meetings, and on Feb. 5, this year, I heard him give a forceful address, clear and to the point. Cushman is living but out of the business, and Locke and Larrabee, I believe, are alive. All the rest went more or less long ago. Of the others living I will not speak save of one of the greater ones who now makes his home with us and is still actively interested in bees, and that is L. C. Root, of Stamford, Conn. Has not little old New England a record to be proud of?

Providence, R. I.

## Beekeeping for Women

BY MRS. HELEN MATHIE.

**I**N these days when, everywhere, women are asking the question "What can I do to earn money at home?" I wonder that more of them do not turn their attention to beekeeping. The greater part of the work is easily within their strength, and requires attention only for a part of the year. The initial investment need not be large, and the up-keep is not heavy. Once established the hives and working tools will last indefinitely if properly cared for. Even if the bees die out, the outfit is left, and an outlay of a few dollars will start another apiary, presumably with better stock than the bees that died. In a good year the profits for time expended are larger than on almost any work a woman can do.

I say I wonder why, but really I believe I know why after all. Almost all women fear them. Of the apiaries within a radius of several towns only one is owned by a woman other than myself. However, she does not fear them, and when at home works among them. I reason that women fear them because although "crazy about bees" for years before I had any, I could not muster courage to start with them, not knowing anything about them, because I felt sure they would sting me if I went near them. If Providence had not sent a swarm to alight almost on my doorstep I doubt if I should know any more about bees today than I did 20 years ago. That it was a mistaken fear I very soon learned, and it would take some pretty hard knocks of adverse fate to drive me out of the bee-business now.

At the time my first swarm adopted me, my sole actual knowledge of them was the seeing of about a peck basketful of them winged into a hive by a neighbor arrayed in veil and gloves, while the remainder of his family hov-



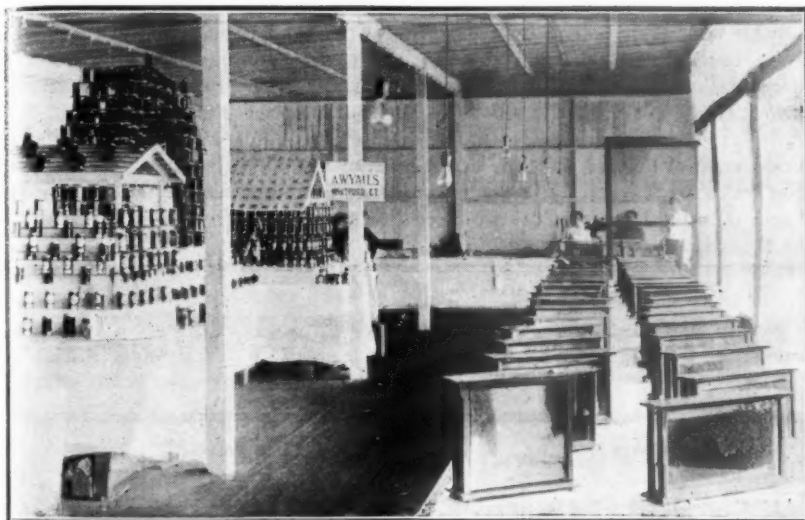


EXHIBIT AT HARTFORD FAIR—ROWS OF BEES SHOWN AT RIGHT

I heartily recommend beekeeping to women wishing to earn money at home in a pleasant easy manner. I notice in picture groups of beekeepers white haired ladies. My own hair is white. Age is no obstacle. Years ago I knew an old lady who had a small apiary. She was small and white haired, and soft voiced. To hear her crooning to her bees, and to see her handling them without harm was a pretty sight, but her grandson could not come within sight of the hives without being chased. Quite evidently they knew their friends from their enemies. No doubt our progressive young women, if they desire, can make a much greater success on a larger scale than we older folk, and we will be glad to have them do so.

Glover, Vt.

## Distance Bees Fly After Honey —Smell vs. Sight

BY GEORGE S. WHEELER.

**A**FTER reading the interesting articles in Gleanings of Dec. 1, by F. M. Baldwin, and of the editors in the American Bee Journal of February on the above subject, I should like to give a little of my experience, as I have been interested in bees for many years.

I had my first swarm in 1856, and have kept bees ever since, both in the North and in Florida. I procured my first Italian queen in 1866, of K. P. Kidder, of Burlington, Vt. Soon after I had some 40 colonies, mostly Italians.

I was very fond of hunting bees, and as no one in my vicinity kept any but the blacks, I had a pretty good chance to line them. If I went north 4 or 5 miles I could find plenty of Italians, and after feeding them they would fly straight for the Wheeler Farm Apiary. When I went in the opposite direction it was the same. These bees certainly could not see the flowers, as my home is among hills and mountains. I have lined bees many times to the west and northwest. There is a mountain which

ered at a safe distance as did I. I had heard a great ringing of bells, beating of pans, shouting, and had seen much running to and fro, but I arrived after the excitement was mostly over. The bees, deposited on a white draped table were marching decorously into their new home urged by a man armed with a hen's wing. I had never seen the inside of a hive, and my reading had been confined to newspaper articles unillustrated, so that my knowledge of bees was very slight; however, I was fascinated and eager to learn, but I kept at a safe distance from any hives with bees in them.

When the swarm came to me it was the men folks who were shy, and I had no notion to let them leave me because I had not grit enough to capture them. I sallied forth arrayed in my husband's rain coat and gloves, with my head tied up in the biggest hat veil I had. I seized a box, a table cloth and a wing, and adopting as nearly as I was able my neighbor's tactics I soon had them in a box. The veil was not all that could be desired, and I received stings through it where it was drawn close to my chin, but I was too much engaged to mind about that.

I longed inexpressibly to overhaul the inside of the hive all that summer, but had not the courage, and about Thanksgiving time I had them carried into the cellar where they wintered with the loss of but a small handful of dead bees on the bottom-board. My experience since then has been varied, some good, some bad, but all highly educational. Like most novices, I wanted to try everything I heard of, and some of these trials were not all that could be desired, and I feel sure of one thing, and that is that the honey bee is not subject to any set of ironclad rules, and very frequently overturns the best laid plans and most plausible theories. I am more and more confirmed in this opinion by reading the experience of others as given in the bee journals. The bees frequently upset all calculations. As long as they follow nature's way unchecked it is quite easy to guess what they will do, but when trying to manipulate them in ways of human planning there is

frequently another guess coming.

I have not lost my interest in them with familiarity. Indeed, the more I learn about them the more interested I become. I have raised chickens, ducks and geese, taught school, taken boarders, canvassed, raised small fruit, done sewing and fancy work, and I have never found any of these occupations so interesting as beekeeping. There has been but little of the work in which I needed help. The hives are carried in and out of the cellar for me, and if a swarm gets too high some one has to help me get them, but in three years this has happened only once.

To the woman of frail physique I know nothing more healthful, interesting, profitable, and within her power. There are really not more than six weeks or two months of the year when they require much time or labor. By planning to prevent swarming and having a man to carry them in and out of the cellar or pack them for winter, there is little work requiring much strength.



AMHERST, MASS., AGRICULTURAL COLLEGE IN DISTANCE

Photo by John H. Lovell.



# American Bee Journal

is  $1\frac{1}{2}$  miles to the top and probably as much more to the foot on the opposite side. I have caught and lined them more than one mile beyond there and they steer for my apiary, and are gone a long time.

In late fall, when there were no flowers on which to find bees, I have often made what I call a smudge (heating honey and comb), and the bees would come  $1\frac{1}{2}$  miles, good looking Italians. Could they see or smell the scent of comb and honey? I have also hunted bees many times in Florida, and I feel sure some of the bees there were more than 2 miles from home. There was a Frenchman called Longo who kept a hundred or more colonies, and I often lined bees that flew in a straight line for his apiary, at least 2 miles from his place. I think perhaps Mr. Baldwin is familiar with the locality I have just mentioned, as it is on the south bank of the Caloosahatchee river, some 2 miles below Alva. I have spent several winters at Owanita, as I have a house and grove there.

Mr. E. R. Root's idea of sight, it seems to me, is a little overdrawn. In my northern home it would be impossible for bees to see over the hills and mountains, but they evidently could smell the fumes of the honey and comb when heated.

I have been interested in the flight of bees for many years, as some queen-breeders have contended their queens would not mix except at only a short distance.

When I first had Italians there were three apiaries in different directions, but none nearer than  $1\frac{1}{2}$  miles, and two of them 2 to  $3\frac{1}{2}$  miles, and their swarms soon became mixed with Italian blood. If their queens did not meet the drones from my yard, where did the Italian marks come from? No one nearer than 8 or 9 miles had Italians.

New Ipswich, N. H.

[Mr. Wheeler is one of the original subscribers of both the American Bee Journal and Gleanings. He has kept

bees since 1856, and a historical sketch of himself was published in the American Bee Journal for Jan. 13, 1898. He is therefore one of the pioneers, and his experience is of value.

There is a difference between the flight of bees for nectar and the flight of the sexes for mating. The drone is stronger of wing than either the worker

or the queen. Besides, when the two insects take wing, it is only necessary that each should travel half the distance that separates them in order to mate. So matings at 4 miles would only indicate a probable flight of half that distance for either, though perhaps the male would travel a little more than the queen.—EDITOR.]

## BEE-KEEPING FOR WOMEN

Conducted by MISS EMMA M. WILSON, Marengo, Ill.

### A Successful South Dakota Beekeeper

I have been a beekeeper since 1910, and also a reader of the American Bee Journal, though at first not a subscriber. Your department has naturally appealed to me most strongly.

Early in the spring of 1910 we ordered two hives of bees from Rapid City to be shipped to our nearest railroad point, Philip, and from there my husband brought them the 40 miles to the ranch on the top of a load of general ranch supplies. The first half day on the road was mid-summer heat, and though he shaded the hives as well as possible, the poor bees must have suffered terribly. Honey ran from one hive. The next morning he started on in the teeth of a bitterly cold northwest wind. When he reached home one hive was a sticky mess, and we brought it into the house to see what I could do with it. It was a pathetic sight. Every bee that still squirmed I bathed and warmed and dried (of course, it seems like a joke now). There were only about a dozen of them that ever crawled again, and though I sought diligently I could find no bee that looked as though it might be a queen.

I was anxious to find her to make sure I could tell royalty when I had a chance.

At the time I was in the primer class and had never been anywhere near close enough to a beehive to touch it before. I had studied a bee-book, however, until I knew from pictures what I ought to see. The spring of 1911 I started with 2 hives, 1912 with 5, 1913 with 7, 1914 with 11, 1915 with 15, and this spring I have 30. The first two years I did not get any honey. They were dry years even for this terribly dry country. In 1912 we got 264 pounds of comb honey; in 1913, 450 pounds; in 1914, 1187 pounds of both comb and extracted, and last year 4000 pounds, 450 pounds of it being comb honey. I aim to have only enough comb honey to supply this immediate neighborhood, as a 40 mile freight haul in a lumber wagon over rough and hilly roads is rather hard on the combs.

It is a fine grade of honey, alfalfa and sweet clover, and a case of the comb honey which went in our county exhibit to the State Fair, and it later was entered by our county representative for an individual prize at the Tri-State Fair in Sioux City, carried off the first prize in its class. Of course, we South Dakotans were much pleased that a kind of honey that is universal in this State should be able to carry off honors over white clover and basswood and the other fine honeys there.

The long rough haul that makes comb honey so impossible for us makes glass and tin honey containers expensive also, so our problem was to find a light container that would not be bulky to haul out. That brought us to the Aikin honey bags. We tried them this year for the first time, and think our problems are solved, as our honey candies so quickly. In our cool Septembers it will candy in two weeks and be real hard in a month sometimes. It is beautiful when it is candied, too, and has proven very popular wherever we have offered it.

Our bees were the first that succeeded in this part of the State. They have attracted considerable interest for that reason. We use double-walled hives and winter out-of-doors. My husband and the rest of the men are far too busy with the stock to give me any great amount of help with the bees. Not being able to depend on any strong



TYPICAL SCENE IN THE WILDS OF MAINE—MOOSEHEAD LAKE FROM MT KINO—Photo by John H. Lovell

# American Bee Journal

man for assistance, cellar wintering seemed out of the question for me, and we have so far been very successful wintering them right where they are the year around. They are somewhat sheltered by trees and brush; besides, we live in a deep and narrow valley.

Our "success" with bees has inspired several people to go and do likewise. I have sold seven hives of bees so far. They do not all have such favorable situations as we. The first neighbor who tried them took a hive of bees with a new queen home just before the Fourth of July and harvested 50 pounds of comb honey. She was much pleased.

Stores were low in all the hives in spring and I was feeding syrup. My friend telephoned me about her bees. She told me she would put some syrup out. Later she telephoned they would not touch it. By that time my bees had left the syrup, as there were plenty of early spring blossoms down in our valley, so I told her not to worry as probably they were gathering from flowers. A week later she looked through her hive and rushed to the telephone to tell me there was absolutely not a cell full of honey in the hive.

I could scarcely credit it as they are only five miles from us, but out on the flat and not so sheltered, and she said she could not find any flowers either. She decided to put the syrup she still had outdoors for them. The next morning she telephoned me in great excitement, her bees were all dead or dying, some just able to crawl, and some on their backs kicking, and very few still able to cling to the frames. She said she could see some of the cells had syrup in them, and they had about emptied the feeder. The feeding of scorched syrup was the only thing I could think was the cause of the trouble, so I asked her about it. She said, "Oh, dear, no! I took it just as it came from the can, just ordinary store syrup." There was doubtless corn syrup in it. Do you suppose that if the bees were actually starved to it they would eat the corn syrup and die like that?

Mr. Frank F. France described in the American Bee Journal a mating box large enough to hold frames half the size of the ordinary frame. I used the mating boxes last year with frames one-third the size of the regular frame. I would rather have the larger ones. I cannot find them in any catalog I have.

Where are the Aikin bags manufactured? I would like to get them made with my name and address on them with the kind of honey mentioned. I would like a pound size that would be just half the height of the two-pound size instead of being so narrow.

I enclose a small plan to show how I wire frames. The bench is low and I sit on a small stool almost the same height.

LISLE W. CHENEY.

Hardingrove, S. Dak.

One would hardly suppose corn syrup so poisonous as actually to kill bees when they are making daily flights, yet there seems no other explanation, and if that is the true explanation think of your neighbor feeding such stuff to her family! Possibly, however, she only got it to feed her bees.

Perhaps you will not find advertised anywhere the small frames you desire,

but any manufacturer of bee-supplies ought to make them to order.

Will some one kindly tell us where to obtain the Aikin bags such as desired. Your plan of wiring frames, although not entirely new, is good. Don't you have trouble sometimes with

the spool playing too freely? If so, drive a nail at each side, and stretch a rubber band from one to the other.

The proverb says: "A bad promise is better broken," so please break that promise not to write often.

## MISCELLANEOUS



## NEWS ITEMS

**Connecticut Meeting.**—The Connecticut Beekeepers' Association will hold its annual meeting at the State Capitol, Hartford, April 3. Following is the program:

10:30 a.m.—Reports of officers and committees, election of officers, collection of dues, new business, etc.

"Reminiscences and progress of beekeeping in Connecticut"—Geo. H. Yale. Mr. Yale was third president of the association and presided continually for five years. His address will deal with the early history of our association.

"History of foulbrood in Connecticut"—Stephen J. Griffen.

"Can a woman manage an apiary?"—Mrs. D. R. Bristol.

1:30 p.m.—"Beekeeping in Hungary"—Alexander Luko. Mr. Luko will tell us of the interesting methods and appliances in use in Hungary. He possesses a number of certificates and medals for beekeeping awarded by the government at various competitions.

"Ventilation affecting storing and swarming"—John T. Cullen.

L. WAYNE ADAMS, Sec.

**The National Secretary's Report.**—At the 46th annual meeting of the National Beekeepers' Association, held at the Sherman House, Chicago, Ill., on Feb. 22, 23, and 24, the delegates present made an effort to place the National on a more stable foundation.

The National has not made much headway during the past few years, and it seems to have receded somewhat from the prominent position it formerly held. The past is gone and it would serve no good purpose to dig up differences which we hope are safely buried. All of the officers did their best, but with a lack of unity progress was impossible.

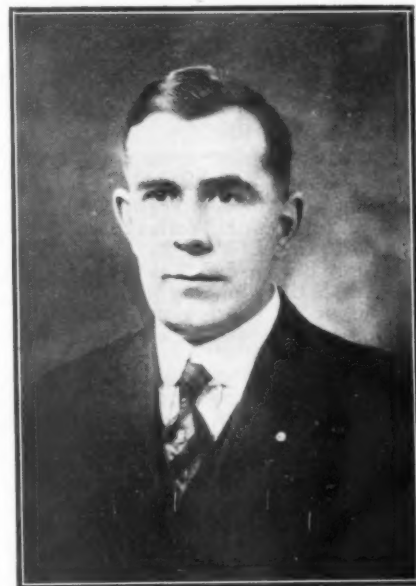
There is room and need for a National association of beekeepers, and an immense amount of good work can be done by such a body, for the good of beekeepers individually and collectively. Dr. C. C. Miller, fittingly expressed the sentiments of those present, when he said that it would be a pity to see the National break up. The Doctor recalled many profitable conventions in days gone by, and these meetings had been the source of much pleasure in the meeting of brother beekeepers and the exchanging of greetings with one another. I am sure the Doctor's remarks made every one of us feel that the National must live, and now that the Doctor has diagnosed, let us make the prognosis favorable.

The sentiment was strongly ex-

pressed that the new officers should avoid commercialism, in the form of selling supplies, etc., and that they should confine themselves to helping the beekeepers along other lines, educational and fraternal, which they thought were just as profitable and more needed by the beekeeper.

With the exception of Mr. E. J. Baxter, of Nauvoo, Ill., a new set of officers were elected as follows:

President—Prof. Francis Jager, Uni-



F. ERIC MILLEN  
Newly elected Secretary of the National

versity Farm, St. Paul, Minn.

Vice-President—Dr. W. M. Copenhagen, Helena, Mont.

Secretary-Treasurer—F. Eric Millen, East Lansing, Mich.

These three officers, together with Mr. E. J. Baxter and Mr. E. S. Miller, of Valparaiso, Ind., to act as directors.

E. D. Townsend, editor and owner of the Beekeepers' Review, resigned as director, so that the new officers would feel free to inaugurate new policies without being tied in any way. Those who are personally acquainted with Mr. Townsend know that he has the interests of the beekeepers at heart, and that he would sooner remove himself than oppose any measure that seemed to be for the good of the cause.

While the Review is still the official organ of the National, it is now owned by Mr. Townsend, who dictates its policies.



# American Bee Journal

The National Beekeepers' Association will work under the articles of the constitution as printed in the 1915 December number of the Review.

Membership dues to the association are \$1.50, which includes the Review. We cordially invite all beekeepers to join the National Beekeepers' Association, members are eligible whether their State association is affiliated or not. We hope the beekeepers will show their confidence in the officers elected and aid us in building a National that will be a source of pride and a credit to one of the greatest beekeeping countries in the world.

F. ERIC MILLEN.

**New Zealand Regulations Concerning Honey.**—Honey intended for export from New Zealand must be inspected and graded by an official "grader."

It must be packed in new and clean tins, not weighing over 120 pounds, lacquered or oiled on the outside to prevent rusting. The cases containing it must be also clean and new. The honey must all be granulated. Four grades are recognized, and the grade to which each case belongs is stamped on the outside. This grading is done without cost to the producer.

We are informed that this official grading of honey for export has a very decidedly favorable influence upon the sale of honey exported.

**A Valuable Manual on Vegetable Growing.**—A most interesting book in the "Farm Manual" series to which belongs Frank C. Pellett's book, "Productive Beekeeping," is "Productive Vegetable Growing," by John W. Lloyd, Professor of Olericulture at the University of Illinois, and an authority on the subject.

The first part of the book is given over to a description of various soils, their adaptabilities to certain vegetables and methods of preparation. Other chapters deal with moisture and temperature conditions, selection of seed, hotbeds and greenhouses, insect pests and their eradication, market gardening and truck growing, harvesting, packing and marketing.

By far the most interesting part of the book, however, to the ordinary small gardener, is that part dealing with home vegetables, gardening and the special chapters on the different vegetables. Too many of the best vegetables do not receive the consideration they should in the home garden, owing to the fact that they are not given the proper growing and cultivating conditions. To these matters Mr. Lloyd gives special attention.

A chart giving approximate time to plant both indoors and outside, etc., is included. The book is handsomely bound and well illustrated and contains 340 pages. The price is \$1.50, and it can be obtained either direct from the publishers, J. B. Lippincott & Co., of Philadelphia, Pa., or from this office.

**Summer Beekeeping Course at the Iowa State College.**—A course in beekeeping is to be offered during the first six weeks of the summer session at the Iowa State College. This course will consist of three lectures and

recitations a week and three periods of practical work a week for the six weeks. The course will not occupy all the students' time, and they will have an opportunity to take other courses that may be related to apiculture in other departments of the college.

This course is offered in addition to the new four-year course in apiculture which will be offered for the first time at the beginning of the next college year in September, 1916.

It will offer an opportunity for school teachers and beginners to obtain the necessary information for successful beekeeping, and it will offer to the beekeeper the chance to learn the latest and best methods.

Information in regard to this course may be had by writing to the Director of the Summer Session, Iowa State College, Ames, Iowa.

**Correction.**—In our September issue the address of R. B. Davis was given as Staunton, Iowa, instead of Indiana, in connection with the article on packing in single-walled hives. On page 56, of the February issue, Lewis Winship's address is given as Springfield, N. Y., when it should be Springville, N. Y.

**Wisconsin Meeting.**—The 37th annual convention of the Wisconsin State Beekeepers' Association was held at Madison Dec. 9 and 10, 1915. The attendance at this convention was the largest in the history of the association, more than 125 being present the afternoon of the first day. The proportion of ladies in attendance was noticeably large.

The following papers were read and discussed:

"Better beekeeping"—F. J. Wells.

"How and why I paint comb foundation with wax"—Edw. Hassinger, Jr.

Under the question box, H. H. Moe questioned the immunity of yellow Italians from European foulbrood. Dr. Phillips responded, asserting their immunity and giving his reasons, based on information and research.

The value of fiber board as a covering for wintering and spring, to act as a non-conductor of heat and an absorbent of moisture, was discussed. It was commended by all who are using it.

The report of the State inspector of apiaries was read.

A talk by F. Kittinger, "Why did the bees crawl out of hives and die?" This matter was discussed at length, but no satisfactory conclusion was reached as to the cause or reason. It appeared, however, that it was something uncommon, having happened to only two or three present, but did not again recur.

Prof. L. V. France, of the University of Minnesota, addressed the convention on the "Recognition of beekeeping by the College of Agriculture of the University of Minnesota."

C. W. Aeppler, in charge of the queen-rearing department at the agricultural college, reported at length. It appeared from his report what was mostly needed for the success of this department, was a more hearty financial support, and hopes were expressed that this department would be better encouraged in this respect for the com-

ing season.

Mr. Aeppler reported that he was unable to fill all orders, owing to several reasons, noticeable two. First, the loss of young queens through cold and wet weather; second, large orders to the extent of 50 queens to one beekeeper. This was discussed, and the consensus of opinion was that as the object of rearing these queens is to furnish new blood and stock to the beekeepers of the State, and obviously not to furnish queens cheap, the supply should be limited to individuals so that each beekeeper should have a chance of securing them. It was suggested to limit the number furnished to one person to ten queens.

Dean Russell, of the Agricultural College, addressed the convention on "State recognition of beekeeping." The address was well received, as it gave us positive assurance that more attention and adequate financial support would be given the beekeeping department with a view of giving it the importance in the Agricultural College that the beekeepers of the State had a right to expect.

Prof. Wilson, Entomologist of the Agricultural College, in charge of the beekeeping department, spoke at length on the work and condition of this department. Prof. Wilson is an enthusiastic practical and scientific beekeeper, who will give this department all the attention and encouragement possible, and the beekeepers were more than pleased with his address.

The following papers also were read and discussed:

"Beginning in extracted honey production"—A. Swahn and Oscar Ritland.

"The agricultural beekeeper"—Henry A. Rather.

"Does beekeeping pay in connection with farming?"—A. L. Kleeber.

The balance of the evening was taken up with stereopticon views by Prof. L. V. France and Dr. Phillips.

The convention convened the next morning at 9:00 o'clock.

"Marketing of honey"—C. P. Dadant, read by the secretary.

"Value of young queens"—N. E. France.

"Selling honey by mail"—E. B. Rosa.

"Outdoor wintering"—Dr. Phillips.

Dr. Phillips paper and the resulting discussion brought out the following facts established by scientific research:

That bees rightly prepared for wintering, with plenty of the best stores, no disturbance, and the right temperature to maintain 57 degrees inside the hive, will come out of the cellar with the slightest possible amount of dead bees, and normally with nearly the same vitality as when put into the cellar; that disturbance and low temperature will cause them to form a compact cluster, generate heat and start brood-rearing; this in turn will cause loss of vitality by exertion and dysentery by consuming too much honey. The older bees will die off, and also many of the younger bees before their time by reason of the abnormal loss of vitality, all of which accounts for so many dead bees on the cellar bottom and spring dwindling of those that are left.

Prof. Norgord, of the Agricultural Society, spoke at length on beekeeping in connection with agricultural pursuits.



# American Bee Journal

On the whole, the convention was honored as never before by the presence before them of the representative men of the University, Agricultural College and Agricultural Society, and of their very evident effort to recognize the Wisconsin State Beekeepers' Association and the general bee-industry of the State as an established factor in the economic industries of Wisconsin.

"Why and how the State of Wisconsin should assist its beekeepers"—W. E. Krause.

Franklin Wilcox, of Mauston, was recommended for the appointment of judge of the Apianian Exhibit at the State Fair.

Officers for 1916: President, N. E. France, Platteville; vice-president, Mrs. Wm. Haberman, Lodi; secretary, Gus Dittmer, Augusta; treasurer, A. C. Allen, Portage. GUS DITTMER, Sec.

10-frame dovetailed hive is most generally favored, and the advertisements in the American Bee Journal will tell you where they can be obtained?

2. Cement stands are good. Common drain tile may be used; also bricks. You may also use two pieces of scantling.

3. There is probably not much difference; although it is not generally considered best to have them face north.

4. Probably not.

5. Far enough so that there shall be a space of three feet or so between any hive and the hive on the next stand.

6. Paint makes them look better and last longer, although some think it as well to leave them unpainted.

7. Probably nothing is better than the best white paint.

8. There is really no need of any alighting-board other than the extension of the bottom-board in front, although some like to have a board with one end on the ground slanting up to the entrance.

9. Some have only one, but there is advantage in having two standing so close as to be almost touching.

10. An untested queen is one which has been laying more than one to 20 days; a tested queen is one which has been laying three weeks or more, so that it may be seen by her worker progeny that she is purely mated.

11. They are not generally considered as good as Italians, although some think them better. Advertisements will show you where to find them.

12. You can hardly do better than to have the frame most commonly in use, 17½x9¼ inches, outside measure.

13. You can get the back numbers of the American Bee Journal for \$1.00 a year. But I strongly advise you to get first a good book, such as Dadant's Langstroth. If I couldn't have both, I'd rather have the book than the back numbers for five or even ten years.

14. A nucleus is a small colony, perhaps one with only bees enough to cover two or three combs, and a bee in a nucleus is just the same as any other bee.

15. It would be too long a story to give all the particulars of the different ways in which bees are wintered outdoors, and this you will get from your bee-book, this department being a sort of supplement to the book, and not expected to tell again the things to be found in any good book on bee-keeping. But the main thing is to have the hives sheltered as much as possible from the winds, and to have some kind of packing to help keep the hives warm.

16. Yes.

17. Two miles at least, and more is better.

## Queen-Excluders for Extracting

1. I would like to put a queen-excluder on an empty hive above the brood-chamber for extracting with the queen confined below. If it happens that drones are left above, what will they do?

2. I notice Mr. Byron Walker's plan of using an upper entrance in connection with an alighting-board so drones can go out freely. I am pleased with the plan. Why does he use two crates or supers at the bottom? I notice in "ABC of Bee Culture," page 210, in Mr. Walker's picture, he uses two supers at the bottom; that the second hive contains full sheets and brood above.

INDIANA.

1. If left with no chance for exit, sooner or later the drones will die, and their bodies will be found on the excluder, not whole, but in pieces, for the bees in their attempts to drag them down tear them in pieces, dragging down all pieces small enough, and finally there will be nothing left of each

## DR. MILLER'S



## ANSWERS

Send Questions either to the office of the American Bee Journal or direct to  
DR. C. C. MILLER, MARENGO, ILL.  
He does NOT answer bee-keeping questions by mail.

### Section Starters

1. Would you advise thin or extra thin foundation for sections?
2. How many pounds of foundation will I need for 800 sections?
3. What size do you cut the top starter?
4. What size the bottom starter?
5. What rig do you have for cutting foundation true?

TEXAS.

ANSWERS.—1. I use thin. The bees are more apt to tear down extra thin, especially if no honey is coming in for a few days.

2. I think about 8 pounds.

3. 3½ inches wide, and 3¼ deep.

4. 3½ by 5.

5. I have used different rigs. The one I use mostly consists of a series of parallel bars used as rulers by which to cut with a pocket knife, fully described in "Fifty Years Among the Bees," but the description would take too much space here.

### Smoke Method

I wrote to a friend to get a full description of the smoke method, which I never saw described in the American Bee Journal since I have read it. My friend did not know it. In your next issue would you have a description of the smoke method of introducing queens; it would be of great service to me?

MONTANA

ANSWER.—You no doubt refer to the plan of Arthur C. Miller, which he prefers to call the distress plan, although it might not inappropriately be called the smoke-distress plan. It has been given fully in this Journal, but I now give it again in the words of Arthur C. Miller himself, as given in a late number of Gleanings in Bee Culture:

"A queenless colony has the entrance to its hive nearly closed, say all but an inch. Into this space a cloud of smoke is blown until the bees roar; then this space is quickly closed. In about a quarter of a minute a queen is run in and the space re-closed. In 10 minutes more the inch space is opened and the bees allowed to ventilate slowly. That is the sum and substance of the method.

"Here are some of the qualifying conditions: First, the hive must be smoke-tight. Open corners, warped covers, cracked floors, etc., are conditions fatal to success with this method. All possible chance of ventilation must be prevented. Second, the smoke must be such as to create the greatest distress and the least danger, and that sort of smoke is the thick white choky kind. Third, enough smoke must be driven in to fill the chamber so completely that no bee will fail to feel it. Fourth, the smoke and bees should be confined for 10 or 15 minutes,

and then relief given slowly as by opening only an inch of the entrance. If the whole of the entrance is opened at once the bees may pour out in a mass and sometimes the queen with them. They soon quiet down, even with only the inch outlet, and when quiet the entrance may be fully opened."

### Clipping—Queens from the South, Etc.

1. Does it affect a queen in clipping her?
2. Is it advisable to buy queens from the South? Is the change too great as far north as I am?
3. How can I transfer bees from hives where combs are built crosswise? I have four colonies and no extra hives.
4. In crossing common bees with Italians, is one good cell enough for every swarm after removing the old queen? I have one Italian colony and three hybrids.

MISSOURI.

ANSWERS.—1. No.

2. So far as I know queens from the South do as well as from the North.

3. Wait until the colony swarms, hive the swarm in a proper hive, set it on the old stand with the old hive close beside it, a week later move the old hive to the opposite side of the swarm, two weeks later still break up the old hive, add the bees to the swarm and melt up the old combs.

4. One good cell is just as good as a dozen.

### A Boy's Questions

1. What kind of bees would you advise; also beehives and where can they be bought?
2. What kind of bee-stands?
3. What direction should they face?
4. Should I have double-walled hives here in northwest Arkansas?
5. How far apart should the stands be?
6. Should supers be painted?
7. What kind of paint should I use for the hives?
8. What kind of alighting-boards should I have?
9. How many beehives should I have on one stand?
10. What is the difference between the tested and untested queens?
11. Are the Caucasian bees good; if so, where can they be bought?
12. What kind of frames are best?
13. I am working very hard so as to make enough money to take the American Bee Journal. What would be the price for three years of the back numbers?
14. What are nuclei bees?
15. How is the best way to winter bees out-of-doors?
16. Is Arkansas a good honey State?
17. How far apart should apiaries be placed?

ARKANSAS.

ANSWERS.—1. The general opinion is that there is no better bee than the 3-banded Italian, such as you already have, although some 3-banders are better than others. The

# American Bee Journal

drone but the shiny thorax.

2 From the picture, Mr. Walker seems to have three stories under the excluder, but no information is given as to what is in them.

Mr. Walker's idea is not merely to have an opening above the excluder through which bees may pass out, but more especially through which they may pass in, so that they may be saved the journey from the lower entrance clear up to the super, and in order to make them enter this upper entrance he places in front of the hive a board slanting at 45 degrees. I don't know just how well this will work, but I should be afraid that the bees would carry into the super pollen that they would leave better below the excluder.

## Telescope Cover

Would you consider a telescope cover, 12 inches in depth to allow 3 inches of packing over brood-frames, sufficient protection against cold after removal from cellar in early spring, where we have frequent snow and frost? NOVA SCOTIA.

ANSWER.—Yes; it ought to answer well.

## Getting Drawn Combs

1. What is the best way to have foundation drawn to have a supply of drawn comb on hand when needed?
2. Why is the method used by foundation makers to get nearly all the wax out of slumgum better than the small presses sold the beekeeper?
3. Do you have the book called Wax Craft for sale? INDIANA.

ANSWERS.—1. Bees will draw out foundation only as they want to use it to put something into it; and if you want drawn combs that contain nothing, in other words empty combs, you can have them filled in the extracting-super and then extract the honey from them.

2. I don't know very much about it practically, but I do know that I can't do as well as those who do things on a larger scale. I am not sure but in some cases live steam is thrown into the mass. Perhaps, however, the chief thing is that with a small press using a small mass it is not possible to make and keep the materials hot as it is when there is a large mass. If I am wrong in this I am ready to be corrected by Editor Dadant.

3. Cowan's book, Wax Craft, can be had from the office of the American Bee Journal at \$1.00.

## Metal Covers—Clover, Etc.

1. What is the best for telescope cover, wood or galvanized iron?
2. What is the best for feeding in the spring, diluted sugar or honey?
3. Which one of the sweet clovers is the best? Is there any difference in the color of honey?
4. Which of the clovers is best for hog pasture in southwestern Minnesota?
5. What is in the slough that bees gather honey from?
6. Is it advisable to use the flax board under telescope covers in winter and summer? MINNESOTA.

ANSWERS.—1. The metal seems to be growing in favor.

2. The honey.

3. I don't know that there's any difference in the honey, but the white clover has the advantage over the yellow that it comes later, and so continues after white clover is done.

4. Alsike is good, yet some of the others may be better. Farmers in that neighborhood can tell you better than I. [White or sweet clover is good.—EDITOR.]

5. Maybe heartsease; maybe something else.

6. It is considered an advantage.

## Value of Italians, Caucasians, Etc.

1. How much would good Italian bees be worth when the hives they are in are so poor that they would have to be transferred?
2. I see in the American Bee Journal where a man moved the hive a little and put another with a frame of brood and the queen in its place and let the field workers go into that one to prevent swarming. Do you think it would work?
3. What do you think of the Caucasian bee as a honey producer?
4. What do you think of buying bees by the pound? NEW YORK.

ANSWERS.—1. The price of bees varies very much. In some places you can get a colony of bees in a good hive for \$5.00, while in others it may increase from that up to \$10.00 or more. To find the value of a colony such as you describe, it would probably be a fair thing to find the cost of a good colony in a good hive, and then from that deduct about a dollar more than the cost of a new hive without any bees.

2. It will work satisfactorily if at the time of making the change half, or more than half, the bees are brushed from the combs taken away, leaving with the brood only enough bees to keep it from chilling.

3. Some prefer them to all others, while most beekeepers prefer Italians.

4. It is likely to be quite a step in advance, since they can be thus sent by express at much less expense than when shipped on combs.

## Entrance Guards

If an entrance guard be placed on a hive in the early spring and kept on all summer what would be the result? When they swarmed what would become of the queen? KANSAS.

ANSWER.—To keep an entrance guard on a hive all summer would be quite likely to court disaster. It would lessen ventilation to some extent. Drones could not get out and would die in the hive. In most cases the colony would swarm, and the queen not going with them the swarm would return, although it is possible it might unite with some other swarm or go to some other hive. This swarming might continue for several days; then a young queen would emerge, and in a few days would be the only queen in the hive. Not being able to fly out to meet a drone she would produce only drones, if indeed she laid at all. The colony would finish its existence by the death of the last worker in a little more than two months after the death of the old queen, unless robbers completed the job much before that.

## Uniting—Granulation, Etc.

1. I have 80 colonies in the cellar doing well so far. I have some of Dadant's bees I want to breed from; they are pure marked Italians. I will let these swarm and use the small swarms to Italianize my hybrids in the fall, paper plan. Tell me how long to leave them on top, how to get bees and queen down, and what to do with the brood-combs if there are any?

2. I run for extracted honey and have combs and foundation. I do not want to increase my hybrids, as I want the hives heavy for winter and all the comb honey I can get. Bees swarm here about June 1. I have scarcely any tame fruit bloom, but some wild fruit bloom before clover, and seldom any buckwheat. I have read of putting queens down on one brood-comb and a wire screen and queen-excluder between them. Please tell me when to put the excluder on and in how many days to take the screen out and when to cut out queen-cells? I want to know how to manage a colony when it swarms, as I want no increase from my hybrids, but want the hives heavy in the fall and full of supers?

3. Will honey extracted from combs three-fourths capped granulate quicker than from combs fully capped? My clover honey granulates very soon after I extract it in the honey house?

5. I have a 1/2-inch hole in the cover with a cork in it, and when the temperature is up to 90 degrees I take the cork out for ventilation. Would you recommend it open in winter in the cellar? ONTARIO.

ANSWERS.—1. You will kill the queen that you want to replace, and at the same time put newspaper over the hive and set over it the hive with the better queen. In five to seven days the bees will be thoroughly united, when you can take away the upper story, although it will do no harm if you leave it untouched for two weeks or more. You will leave in the lower story the best frames from both stories, and if you have no use for the combs you take away you can keep them over winter to be used the next summer for swarms or any other way you like, looking out that mice don't get at them.

As you want to have your colonies supplied with queens of the better stock it may do no harm to suggest another way that you might like. Take brood from colonies with poorer queens and give to colonies with best queens, making these last strong so that they will swarm first. For instance, suppose colony A has one of your best queens, and B, C, and D have poorer queens. Strengthen A by giving it sealed brood from the others, so it will swarm first. When A swarms, hive the swarm and set it on the old stand, taking the old hive away and putting it on the stand of B, and setting B on some new stand. The field bees of B will unite with A, making A strong, and in something like a week or more it will swarm. When it does, do as you did before, setting the swarm in place of A, only this time set A in place of C, setting C in a new place. Perhaps two days later A will swarm again, when you will set the swarm in place of A, setting A in place of D, and setting D in a new place. Thus you have improved queens in the hives that took the places of all the hives you have moved, and later on, if you wish, you can kill any of the old queens and unite.

2. What you purpose to follow is the Demaree plan. You will operate just before you think there is danger of the bees swarming. If you want to take a little more pains, you can look for queen-cells once a week or ten days, and operate as soon as you find cells. No screen is used, just the queen-excluder, the queen and one brood-comb being left in the story under the excluder, and the hive filled up with frames filled with foundation. Eight or ten days later destroy any cells that may be found over the excluder.

3. Kill the old queen and destroy all queen-cells but one. Or, kill the old queen and leave the cells. Then, beginning a week later, go every evening after bees stop flying, put your ear to the hive and listen to hear a young queen piping. When you hear this, go next morning and destroy all queen-cells. Pay no attention to the queen, she is free in the hive and will take care of herself.

4. The honey in combs only partly sealed is likely to granulate before that which is more thoroughly ripened and all sealed.

5. The ventilation is good both summer and winter, and it would be no harm to have two or three times as much.

## When Does Alfalfa Yield Honey?

Does alfalfa yield honey the first year?

ILLINOIS.

ANSWER.—No, nor the tenth year in your locality. At least alfalfa has never yielded to amount to anything in my locality, and I am within 25 miles of you. As a rule it yields no honey east of the Mississippi. Where it does yield, I think it is not until the second year.



# American Bee Journal

## Extracting Wax

I would like to know how to get wax out of old comb in some clean easy way. I have a lot of it, and have spoiled some in boiling the comb to get the wax out. I will be glad if you will tell me some way. NEW YORK.

ANSWER.—I suspect that you have no book on beekeeping, and I strongly advise you to get one. I feel pretty sure you will say it is worth five times its cost. In that you will find answers to most of the questions you would like to ask. I am always glad to receive questions about things not entirely clear in the books, and this department is meant to fit just such cases. As to the matter of wax, I have had a good deal of experience on a small scale, and the very best thing I know is to send the old combs and scraps to those who advertise that they melt up such material and get out the wax. It is quite a saving, for they get out more wax than I possibly can.

(The only absolutely indispensable requirements in rendering combs into wax are to use plenty of rain water with the combs, in a tin boiler and dip the melted wax out through a screen pocket with a ladle, as it comes to the surface, and not let it overboil or run over. But the experience of the past indicates that those who make a business of it can save you some money, as they get enough more wax out of it to make it profitable to both.—C. P. D.)

## Increase by Division

1. I have a single colony and would like to make some increase, say two colonies out of the one and get some surplus. In order to do this would it be best to divide early or wait until the main flow is over and feed if necessary?

2. Doesn't opening the hives once a week to look for indications of swarming, etc., as advised in the books, greatly interfere with the work of the bees?

3. In one part of your book you say that sections are removed as soon as completed, and on another page the statement is made that you sometimes have six or seven supers on at a time. Which is the better way?

4. You say that you do away with all queens that are not good. Is there any other way of telling other than tearing open the hives frequently, if she is good or not?

5. In making a single frame observation hive what should be the inside width between the two sheets of glass?

6. During last summer I sometimes noticed two bees tumbling out of the hive, tightly locked together. They would roll down the inclined entrance board to the ground, and after struggling for a while would sometimes fly off together while clinched. Was this robbing? There is no other bee-yard within two miles.

7. In Gleanings for April 15, 1914, you say that you had seven or eight swarms, but that they were not hived as such. What was done with these swarms?

8. Since I cannot be with my bees every day, shook swarming would, I presume, be my only plan to control swarming, and as a swarm may issue anyhow, in spite of the preventive methods tried, the books say that if this happens the old colony should be set on a new stand if increase is desired, and given a queen or ripe queen-cell. Now what becomes of the queen-cells that were built in the old colony when it swarmed?

9. In Gleanings for April 15, 1915, page 338, you say "put the empty 8-frame bodies on top." In the American Bee Journal for January, 1915, page 30, you say "always put the second story below." Which way is better?

10. My hives are 10 frames. Could I work your plan of building up the bees by using shallow or half story bodies to give the queen more room in the same way that you use full depth 8-frame bodies? Would it be better to use regular hive bodies?

PENNSYLVANIA.

ANSWERS.—Before answering any of your questions I want to say that it is refreshing to meet a man who has more bee-books as well as more bee-journals than he has colonies of bees. The man who thinks he can keep bees without having any book of instruction is saving at the spigot and wasting

at the bung-hole. It will always be a pleasure to receive questions from you. Now for your questions.

1. In your case it would probably be as well to make the division just before danger of swarming, perhaps by the plan that later on you call shook-swarming (only please don't call it by that name unless you favor saying, "I have took more honey than was took by my neighbor." Shake or shaken is better English, and you're not in the habit of using bad English). If you wait until the flow is over you are likely to have too much trouble with the bees trying to swarm. It might be a good plan for you to set the hive with the rest of the brood close beside it, then a week later remove the latter to a new stand. That would probably give you more surplus and still allow both colonies to be in good shape for winter.

2. I don't think it interferes much, certainly not enough to overbalance the advantage, and yet it does no good to open a hive unless there is some reason for it.

3. Both are good, and both happen at the same time. A hive may have on it three to seven supers of sections, some of them containing very little honey and from that up to being filled and yet a number of sections unsealed. As soon as any one of the supers has its sections completed the super is removed. Indeed, generally the super is removed while the sections at the four corners are not yet completed.

4. Generally you will not—indeed, generally you cannot—judge as to the value of a queen by opening the hive and examining. You can hardly judge in ordinary cases until the close of the season, when the queen has done a full season's work. Then she will be considered good or bad according as her colony has stored above or below the average amount of surplus.

5. I don't know what is the generally accepted distance between the two panes of glass, but from my experience with nucleus hives having only one frame, I should judge it might be two inches or a trifle more. With less than that the bees are more likely to swarm out. A less distance is likely to make less trouble with bits of comb built where not wanted, but it is no great trouble to clean out such bits from time to time.

6. You may feel certain that one of those bees was trying to rob. It could easily come two miles. It is just possible, too, that bees might be nearer than two miles without you knowing it.

7. The queen being clipped could not go with the swarm, and so the swarm returned to the hive, and then the colony was treated in one of the ways described in "Fifty Years Among the Bees."

8. What becomes of the queen-cells after a colony has swarmed and is removed to a new stand depends somewhat on the time when the removal is made. If moved at the time of swarming or very shortly thereafter, it is possible that the first virgin emerging will be allowed to kill all her royal sisters in their cradles, and it is also possible that one or more afterwards will issue before all cells are destroyed. If, however, the swarm be set on the old stand with the old hive set on a new stand a week later, it is almost certain that there will be no more swarming, all the cells after the first being destroyed. If the beekeeper wants to give a queen or a ripe cell, he must make it his business to destroy first all cells in the hive.

9. I have spent no little time looking over and over again page 338, to which you refer in Gleanings, but cannot find what you quote. There may have been some special case in

which it would be advisable to "put the empty 8-frame bodies on top," but in the case quoted from American Bee Journal, I should put them below. (Last year I put them on top because a more lazy way, but not so good a way.) Kindly give me the exact place to find what you quote in Gleanings, and I think I can explain that there is no conflict, although I do not by any means claim that I am always consistent.

10. I think the shallow stories would work just as well as the deeper ones.

## Transferring Bees from an Old Box-Hive

I have a good colony of bees in an old box-hive. I never transferred any or ever saw it done. I am rather afraid to start the job. If I put a good hive above or below, do you think the queen would go into the new hive to lay her eggs as the old box-hive is not very large? ILLINOIS.

ANSWER.—Yes, when the old quarters become too cramped the bees will work up into a new hive placed over, and still better into one placed under. Another way you can do is to wait until the bees swarm, hive the swarm into a proper hive, set the swarm on the old stand with the old hive close beside it, a week later move the old hive to the other side of the new one, and then two weeks later still, at which time all the worker-brood will have emerged, break up the old hive, adding the bees to the swarm and melting up the old combs.

## Transferring Bees into Standard 10-Frame Hives

I have seven colonies of bees in soap boxes and home-made hives no two alike as to size, etc. Kindly give me instructions as to the best way to transfer them into standard dovetailed 10-frame hives that I have. When will be the best time to do this, and what will I do for starters in the new hives? ARKANSAS.

ANSWER.—Wait until the colony swarms and hive the swarm in one of your up-to-date hives. Set the swarm on the old stand that the old hive occupied, and set the old hive close beside it. A week later jump the old hive over to the other side of the swarm. Two weeks later still, when all the worker-brood will have emerged, break up the old hive, add the bees to the swarm, and melt up the old combs. You can fasten starters of foundation in the frames, but it will be much better to fill the frames with full sheets of foundation.

## Drone-Comb in Sections

In as much as a given area of drone-comb will store the same amount of honey as a like area of worker-comb, and as less wax and therefore work is required to construct the drone-comb, why is not all super foundation for use in sections, drone foundation, instead of worker? NEW YORK?

ANSWER.—I don't know for certain, but I think some doubt has been thrown upon the belief that drone-comb takes less wax than worker-comb. However, even if it should take less, the gain in that direction could not be enough to counterbalance the objections. It goes without saying that no drone-comb is wanted in the brood-nest, although some favor a little there. Probably, however, no one wants as much of it in the brood-chamber as the bees would have there if left to their own devices. If there is not as much in the brood-chamber as the bees like, then they prepare for eggs any drone-comb found in the super, or build drone-comb in any vacancy found there, and the queen goes up and lays there. Unless one wants the trouble and expense of using queen-excluders, the only thing is to have worker-foundation in the super, and to have each section filled with it.



# American Bee Journal

## Classified Department

[Advertisements in this department will be inserted at 15 cents per line, with no discounts of any kind. Notices here cannot be less than two lines. If wanted in this department, you must say so when ordering.]

### BEES AND QUEENS.

**FINEST Italian Queens.** Send for booklet. Jay Smith, 1159 DeWolfe St., Vincennes, Ind.

**PHELPS' Golden Italian Queens** will please you.

**TELL** several thousand people what you have for sale with a few words in this department.

**BEES AND QUEENS** from my New Jersey apiary. J. H. M. Cook, 1411 70 Cortland St., New York City.

**WANTED**—To buy a few colonies of Italian bees. F. C. Bennett, Jamestown, N. Dak.

**VIGOROUS Prolific Italian Queens**, \$1.00 each; 6 for \$5.00. June 1st. A. V. Small, 2302 Agency Road, St. Joseph, Mo.

**NORTHERN BRED ITALIANS**, "Nutmeg" strain Circular. A. W. Yates, 3 Chapman St., Hartford, Conn.

**PHELPS' Golden Italian Bees** are hustlers

**QUEENS FROM THE PENN CO.** See our large ad. elsewhere in this Journal.

**WILL TRADE** fine, young Italian queens for first-class brood-combs, wired, in Hoffman frames. C. S. Engle, Beeville, Texas.

**FOR SALE**—Leather-colored Italian bees by pound. Queens and nuclei a specialty. Write to C. H. Cobb, Belleville, Ark.

**ITALIAN QUEENS** that produce hustlers. Nuclei and pound packages. A. E. Crandall & Son, Berlin, Conn.

**DOOLITTLE & CLARK's** Italian breeding queens will be ready for delivery May 1. Prices, \$1.00, \$5.00, and \$2.50. Marietta, N. Y.

**READY NOW** 1-lb. 3-band Italian bees with queen, \$1.65. 2-fr. nuclei with queen, \$2.25. Rosedale Apiaries. J. B. Marshall, Big Bend, La.

**BEE-KEEPER**, let us send our catalog of hives, smokers, foundation, veils, etc. They are nice and cheap. White Mfg. Co., 4411 Greenville, Tex.

**INDIANOLA APIARY** offers bees and queens for sale. Untested, 75c. Tested, \$1.25. Bees in 1-lb. packages, \$1.00; 1-frame nucleus, \$1.25. Add price of queen if wanted. J. Warren Sherman, Valdosta, Ga.

**QUEENS OF QUALITY**—The genuine "quality" kind of dark Italians bred for business. Guaranteed to please or your money back. Circular free. J. I. Banks, Dowelltown, Tenn.

**FOR SALE**—Bright Italian queens at 75 cts. each; \$7.50 per dozen or \$60 per 100. Ready April 15. Safe arrival and satisfaction guaranteed. W. W. Talley, Rt. 4, Greenville, Ala.

**QUIRIN's** superior northern-bred Italian bees and queens are hardy, and will please you. More than 20 years a breeder. Orders booked now. Free circular. Honeydew for bee food, 5c a lb. H. G. Quirin, Bellevue, O.

**FOR SALE**—In order to make room for early cells we are offering select tested queens for \$1.00 each if taken by April 15th. These are young queens and were reared late last fall. M. C. Berry & Co., Hayneville, Ala.

**A LIMITED** number of new colonies three-banded Italians in nearly new eight-frame hives, \$6.50 each. This includes one super. Strawberry bed, postpaid, \$1.00. Cherry Grove Fruit Farm, Dows, Iowa.

**FOR SALE**—Bright Italian queens this season, 75c each; \$8.00 per dozen. Safe arrival and satisfaction guaranteed. T. J. Talley, Rt. 3, Greenville, Ala.

**My BRIGHT Italian queens** will be ready to ship after April 1st at 60c each. Send for price list. Safe arrival and satisfaction guaranteed. M. Bates, Rt. 4, Greenville, Ala.

**GOLDEN QUEENS** that produce Golden Workers of the brightest kind. I will challenge the world on my Golden and their honey-getting qualities. Price, \$1.00 each; Tested, \$2.00; Breeders, \$5.00 and \$10.00. 2411 J. B. Brockwell, Barnetts, Va.

**QUEENS**, improved three-band Italians bred for business, June 1 to Nov. 15. Untested Queens, 75c each; dozen, \$8.00; Select, \$1.00 each; dozen, \$10. Tested Queens, \$1.25; dozen, \$12. Safe arrival and satisfaction guaranteed. H. C. Clemons, Boyd, Ky.

**FOR SALE**—Three-banded Italian queens. Nuclei a specialty. Bees by the pound. My stock will please you as it has others. Let me book your order for spring delivery. Write for circular and price list. J. L. Leath, Corinth, Miss.

**BEES WANTED**—20 10-fr. Lang. hives, telescope covers, with Italians or Carniolans, from the closest distance. Inquirer must state price. S. H., 2042 Russell Ave. No., Minneapolis, Minn.

**WE WANT** to tell you about our bees, quote our prices on queens and bees by the pound and let you know the express rate from Brady to your station. Let us hear from you. R. V. & M. C. Stearns, Brady, Tex.

**An established strain** of honey gathering golden stock. Honey is what you want without much swarming. Book your orders early to save delay. One untested queen, \$1.00; 6 for \$5.00; 12 for \$9.00. Write us what you want. T. S. Hall, Talking Rock, Ga.

**THREE-BANDED ITALIANS** ready May and June, \$1.00 each; 6 for \$5.00; 12 for \$9.00; after June, 75c each; 6 for \$4.25; 12 for \$8.00. For larger lots write Curd Walker, Jellico, Tenn.

**FOR SALE**—Golden Italian Queens and Nuclei about June 1st. Send for price list. J. I. Danielson, Fairfield, Iowa.

**QUEENS** from my honey-gathering strains will be ready to ship April 1st. In honey-getting qualities they have few equals. See my advertisement elsewhere in this Journal. D. E. Brothers, Attalla, Ala.

**FOR SALE**—Golden Italian queens about the first of May. Untested, 70c; \$8.00 dozen. Select untested, 80c; \$9.00 a doz. Tested, \$1.00. Select tested, \$1.25. No foulbrood in my apiary. D. T. Gaster, Rt. 2, Randleman, N. C.

**CARNIOLAN**, golden, and 3-banded Italian queens. Tested, \$1.00. Untested, 75c; 6, \$4.20; 12, \$7.80. 1/2-lb. bees, 75c; 1-lb. \$1.25. Nuclei, per frame, \$1.25. No disease; everything guaranteed. Write for price list. C. B. Bankston, Buffalo, Leon Co., Tex.

**GRAY CAUCASIANS**—Early breeders; great honey gatherers; cap beautifully white; great comb builders; very prolific; gentle; hardy; good winterers. Untested, \$1.00. Select untested, \$1.25. Tested, \$1.50. Select tested, \$2.00. H. W. Fulmer, Andalusia, Pa.

**HAVING** secured breeders of Dr. Miller, we are offering daughters of his famous strain of Italians at the low price of \$1.50 each. Queens of our own strain at 75c each. One pound bees, \$1.50; 2-frame nuclei, \$2.25. Full colony in 8-frame hive at \$6.50; 10-frame, \$7.50; 200 colonies for spring delivery at \$6.00 each, 10-fr. hives. The Stover Apiaries, Mayhew, Miss.

**FOR SALE**—Good Italian queens, untested, 75c; tested, \$1.00; nuclei, 2-frame, \$3.00; 1-lb. package, \$2.00; 2-lb. package, \$3.00. Untested queen with bees at above prices. Will begin to send about April 1st. G. W. Moon, 1004 Park Ave., Little Rock, Ark.

**IF YOU** wish to get early queens and combless packages place your orders early with the Marchant Bros., Union Springs, Ala. See our ad elsewhere in this Journal.

**PHELPS' Golden Italian Queens** combine the qualities you want. They are great honey gatherers, beautiful and gentle. Mated, \$1.00; six, \$5.00; Tested, \$3.00; Breeders, \$5.00 and \$10. C. W. Phelps & Son, 3 Wilcox St., Binghamton, N. Y.

**PLACE** your order early to insure prompt service. Tested, \$1.25; untested, \$1.00. Italians and Golden. John W. Pharr, Berclair, Tex.

**GOLDEN** and leather-colored Italians; 33 years' experience as honey producer and queen-breeder. Prices: Select untested, 1 queen, \$1.00; 6, \$4.00; 12, \$7.25. Tested, 1, \$1.50; 12, \$15. Make P. O. orders payable to Blythe. Money returned for any queens not satisfactory. B. J. Cole, Fertilla, Riverside Co., Calif.

**BEES AND QUEENS**—Doolittle's Italian stock speaks for itself. They are gentle, resist disease, and are fine honey gatherers. We breed this stock only. Untested queens 75c each; \$8.00 per dozen; \$60 per hundred. Tested queens, \$1.25 each; \$12 per dozen; \$85 per hundred. Three frame nuclei, \$2.25 each; \$200 per hundred. Bees 1/2-lb. pkgs., 75c each; \$60 per hundred; 1 lb. pkgs., \$1.00 each, \$85 per hundred. Add price of queens to above pkgs. Complete catalog free on application. Spencer Apiaries Co., Nordhoff, Calif.

**ITALIAN QUEENS**, prompt service; queens mailed to purchaser in new style of introducing cage that is safe and sure. Bees from a one-frame nucleus to a carload. Write for price list on colonies, queens and nuclei. J. F. Diemer, Rt. 3, Liberty, Mo.

**QUEENS**—EARLY QUEENS, GOLDEN OR LEATHER-COLORED ITALIANS, one select untested, \$1.00; 6, \$4.25; 12, \$8.00. Tested, \$1.25. Best breeder, \$5.00. EARLY SWARMS OF YOUNG BEES in light screen cage a specialty. One 1-lb. package, \$1.25; one 2-lb., \$2.25, queen extra. For ten or more write for price; also nuclei and full colonies. Orders booked now for bees and queens, both ready for delivery March 15 and after. Safe arrival, prompt service and satisfaction guaranteed. Circular free. J. E. Wing, 155 Schiele Ave., San Jose, Calif.

**CARNIOLAN**, Golden and Three-Banded Italian queens from April to October. Tested, \$1.00 each; 6, \$5.40; 12, \$10.20. Select tested \$1.25 each; 12, \$13.80. Untested, 75c each; 6, \$4.20; 12, \$7.80. Select untested, 85c each; 6, \$4.80; 12, \$9.00. Breeders, \$3.00 to \$5.00. Virgins, 50c each; 6, \$2.50; 12, \$4.00. Bees, 1-lb., \$1.25; 2 lbs. \$2.25; 1/2 lb. 75c. Nuclei, 1 frame, \$1.25; 2 frames, \$2.25; 3 fr., \$3.00. Full colonies with tested queens, 8 fr., \$6.50; 10 frame, \$7.00. No disease, safe delivery and satisfaction guaranteed. Money must accompany the order. Write for price list. I. N. Bankston, Buffalo, Tex.

### SITUATIONS.

**WANTED** an expert bee man at once to help in season of 1916. 1100 colonies. Good wages to right man. J. E. Hanks, Hagerman, Idaho.

**WANTED**—Man with some experience to take care of 150 colonies of bees for 1916. Who, if conditions suit him, buy bees or take them on shares for 1917. German with some experience in farming preferred. Give all particulars in first letter. Chas. Bentrup, Deerfield, Kans.

**DEPUTY INSPECTORS**—On May 6, 1916, examinations will be held to provide an eligible list of deputy bee inspectors for the State of Illinois, the salary of whom is \$4.00 per day. For further particulars address W. R. Robinson, Secretary State Civil Service Commission, Springfield, Ill.

### HONEY AND BEESWAX

**WANTED**—Comb, extracted honey, and beeswax. R. A. Burnett & Co., 6411 173 S. Water St., Chicago, Ill.

**BEST** flavor alfalfa sweet clover honey at a very reasonable price. Ask for delivered price on 2 60-lb. cans or more. Wesley Foster, Boulder, Colo.

# American Bee Journal

**FOR SALE**—Extra good light amber mesquite and alfalfa honey. Two 60-pound cans to case, 5c a pound; 5 and 10 pound friction-top pails, 8c per pound per hundred weight. Cash with order on board of cars here.  
B. A. Hadsell, Buckeye, Ariz.

**FOR SALE**—10,000 pounds amber honey in 60-lb. cans or friction-top pails. Best quality; prices right; sample.  
E. S. Miller, Valparaiso, Ind.

**FOR SALE**—Water-white alfalfa, white clover, amber alfalfa, and amber fall honey in 60-lb. cans or smaller packages. Amber fall honey is of our own extracting, and can also be furnished in barrels. Write for sample of kind desired and state quantity you can use. Dadant & Sons, Hamilton, Ill.

## FOR SALE

**FOR SALE**—Friction-top pails, 5-lb. size, per 100, \$4.50; 500, \$21.25; 10-lb. size per 100, \$6.25; 500, \$30. Low prices on other sizes in bulk. Also furnished in re-shipping cases. Shipped from Chicago.  
A. G. Woodman Co., Grand Rapids, Mich.

**FOR SALE**—200 colonies of bees, 5 acres of land. N. L. Anderson, Spearfish, S. Dak.

**FOR SALE** or to let on shares 250 well kept colonies, in irrigated alfalfa region (Kansas); season 1914 averaged 110 pounds. Address, C. O. Davison, Presby. Hosp., Pittsburg, Pa.

**SEE** our large ad elsewhere in this Journal. On bees in packages we will express on lots of five or more packages to points east of the Dakota, Nebraska, Colorado and Texas lines, south of the Canadian boundary. Prompt delivery guaranteed.  
M. C. Berry & Co., Hayneville, Ala.

**FOR SALE**—170 colonies of bees equipped for extracting in 2 apiaries one mile apart, in an alfalfa belt three miles from Fallon, Nev., in the heart of the Carson-Truckee U. S. Government Reclamation project. For particulars, address Gillman H. Wright, R. F. D. No. 1, Fallon, Nev.

**FOR SALE**—150 Alexander feeders, 12c each, used one season. \$16 cider mill, \$8.00. 800 wire moving screens, strong frame, 600-8 fr., 4c; 200-10 fr., 5c. 4-90 gal. honey tanks, used one season, \$6.00 each. 4 fr. Root automatic reversible extractor, \$12.50. New \$70 Reflex camera, \$55. An Eastman 4x5, 18 in. bellows, cost \$32, \$15. 100 8-fr. hive bodies, painted, frames wired, 50c each. 200 new zinc queen excluders, 20c each. Empty 60-lb. cans, 2 in a case, 40c each. Will sell for cash or will trade for honey, or bees in two-pound packages.  
Wesley Foster, Boulder, Colo.

## HONEY LABELS

**HONEY LABELS** that create a favorable impression on the buyer. Dealers admire them and give them prominence. Catalog Free. Liberty Pub. Co., Sta. D, Box 4H, Cleveland, O.

## SUPPLIES.

**HOFFMAN** self spacing frames in flat, 100. \$3.00; 500, \$13.75; 1000, \$27.  
Sivelevetts Frame Works, Whitneyville, Ct.

**Do You** want the best foundation faster? Then buy "The Pangburn," price \$1.75, postpaid, mfg. by W. S. Pangburn, Center Junction, Iowa.

**FOR SALE**—Cedar or pine dovetailed hives, also full line of supplies including Dadant's foundation. Write for catalog.  
A. E. Burdick, Sunnyside, Wash.

**GOOD** second hand 60-pound cans, 25c per case of two cans f. o. b. Cincinnati; terms cash. C. H. W. Weber & Co., Cincinnati, O.

**BEEKEEPERS' SUPPLIES** sold at a reduction. New prices now ready. Send for list free.  
W. D. Soper, Jackson, Mich.

**NOTICE**—Beekeepers when in need of supplies write us for prices. We can save you money. We make a specialty of odd sized hives.  
The M. C. Silsbee Co., Cohocton, Rt. 3, N. Y.

**FOR SALE**—Medium brood foundation, one to ten lbs., 52c per lb. Up to 25 lbs., 50c. Up to 50 lbs., 48c; 100 lbs., 46c, prepaid in Louisiana. Root's goods for sale. Beeswax wanted, 26c cash, 27c in trade.  
J. F. Archdekin, Bordlonville, La.

**COMB FOUNDATION**—You can have your beeswax made into best quality foundation. Also the wax from old combs or "slumgum." We get it all out. On shares or very cheap for cash; new factory; old liberal terms; cheapest and handiest transportation for all northern beekeepers. You always get your own wax back.  
J. J. Angus,  
434 Fulton St., Grand Haven, Mich.

## MISCELLANEOUS

**FOR SALE**—California little suburban farms, suitable for poultry, fruit and garden. Terms, write  
E. R. Waite,  
Shawnee, Okla.

**FOR SALE**—35 colonies pure Italian bees with select tested queens of J. P. Moore strain, \$4.50 per colony; 35 colonies with mated queens from same strain, \$4.00 per col.; 35 cols. light colored hybrids from the same strain with queens, \$3.50 per col., all in 8-frame bodies in good winter cases, mostly the Quinby standard, full depth self-spacing Hoffman frames, 8 to each hive, all combs straight, and all strong and healthy with plenty of honey, f. o. b. here.  
Wilmer Clarke, Box 200, Earlville, Ind. Co. N. Y.

**FOR SALE**—A fine farm in Florida, 10 or 20 acres, 2 acre orange grove, also apiary. Fifteen minutes walk from railroad depot. Write for particulars.  
Chas. Mack,  
Mannville, Putnam Co., Fla.

**FOR SALE**—A good bee location; 48 acres with good house and barn; also 30 colonies of bees with fixtures. Located in the central part of Wisconsin. For further information write to  
Geo. Delano,  
Royalton, Waupaca Co., Wis.

**FREE FOR SIX MONTHS**—My SPECIAL offer to introduce my magazine, "INVESTING FOR PROFIT." It is worth \$10 a copy to any one who has been getting poorer while the rich, richer. It demonstrates the REAL earning power of money, and shows how any one, no matter how poor, CAN acquire riches. **INVESTING FOR PROFIT** is the only progressive financial journal published. It shows how \$100 grows to \$2200. Write now and I'll send it six months free.  
H. L. Barber, 546-20 W. Jackson Blvd., Chicago, Ill.

## POULTRY

**RHODE ISLAND REDS**—Both Combs. High grade; carefully bred; none better. Prices reasonable. Stock and eggs, by setting or hundred lots. Mating list free.  
Fred Oertel, Box 24, Brighton, Ill.

If You breed fancy poultry, offer your surplus stock or eggs for sale in our classified columns.

**BARRED ROCKS** standard bred eggs for hatching.  
W. Coffman,  
Rt. 3, Benton Harbor, Mich.

**POULTRY PAPER**, 44-124 page periodical, up to date, tells all you want to know about care and management of poultry, for pleasure or profit; four months for 10 cents. Poultry Advocate, Dept. 230, Syracuse, N. Y.

## Productive Bee-Keeping

The best methods for producing honey, under the greatest variety of conditions, have been studied, sifted and excellently arranged in this thorough, scientific yet practical volume by Frank C. Pellett, Iowa State Apiarist. The author has been in a bee atmosphere since early youth, his career has been that of a successful honey-producer, instructor to the profession, and an official government inspector of hives. It is a new kind of bee book and the best kind. He lets the other fellow talk about the poetry of the bee—he talks about the relation between your hives and your pocket-book.

Here will be found the material needed by the extensive producer who wants to have the latest information at his hand, the small producer who wants to study that he may make progress on the surest lines, by the beginner or student who wants to set up for himself and to do so upon the scientific basis that will bring the best return. The last word upon every subject connected with the industry is presented in a manner easily understood and immediately applied in the work of the expert or the beginner.

The 134 photographic illustrations are of the highest class, the handsome cloth binding is durable. 316 pages. Price \$1.50 net, or postpaid with the American Bee Journal, one year, only \$2.00.

# EAT HONEY

## PREPAREDNESS

### High Grade Queens

### Bees by the Pound

Prepare for a big crop of honey by getting bees and queens from

**M. C. BERRY & COMPANY**

**THREE-BANDED ITALIAN BEES AND QUEENS BRED FOR HONEY PRODUCTION**

Price List—Swarms of bees in packages ready to ship now.

1-lb. Swarms, \$1.25; 2-lb. Swarms, \$2.35; 3-lb. Swarms, \$3.35; 5-lb. Swarms, \$5.35.

If queens are wanted add price as according to price list. On lots of 5 packages or more will **prepay express** to your address east of the Dakota, Nebraska, Colorado and Texas lines, and south of the Canadian boundary. This applies only on orders received in April.

Price List of our queens by return mail.

Untested, 75 cts. Select Untested, 90 cts. Tested, \$1.25. Select Tested, \$1.50. All queens are warranted purely mated. Wings clipped free of charge.

Our queens are bred from **Select Honey Gathering Stock**, the choice of over 1000, hustling, honey-producing colonies, that produce about two solid cars of honey annually. All orders for either bees in packages or queens will be filled **promptly** by return mail or express or as per booking. **There will be absolutely no delay.** We take only as many orders as we can fill and do so **promptly.** Let us have your order and get your **bees on time**, or your **money back** by return mail. Our capacity is 100 1-lb. swarms a day and 6000 queens a year. We have no disease of any kind. Safe arrival and satisfaction we guarantee. Write for prices on wholesale quantities.

**M. C. BERRY & COMPANY, Hayneville, Alabama**  
Successors to Brown & Berry  
Largest Package Shippers in the South



# American Bee Journal

## The National Agricultural Society

Was founded by a group of far-seeing men of national reputation. Their aim is a high one—to weld together the various agricultural interests and make the organization a strong factor in national development. Every patriotic farmer should give his support.



Progress  
Prosperity  
Patriotism  
Better Agriculture  
Broader Citizenship  
Bigger Opportunities

### CONSTITUTION—Article 11

The objects of this Society shall be as follows: (a) To effect an organization, non-partisan and non-political, which by its unquestioned sponsorship and membership shall command general confidence and afford a common mouthpiece for the varied and diversified agricultural interests of the country on matters of National concern.

**THE FIELD**  
ILLUSTRATED

America's Only Quarterly Farm Monthly

All That Its Name Implies and More

The  
**AGRICULTURAL**  
**DIGEST**

### What National Agricultural Society Can Do for You

In addition to the obvious advantages that will come to you as a member of a society of such high standing there are two distinct, tangible benefits. **THE FIELD ILLUSTRATED** and **THE AGRICULTURAL DIGEST** will be sent without further expense to each member for one year upon payment of his annual dues of **\$2.00**.

Tear off blank at right, fill in name and address, and mail with currency, check or money order for **\$2.00**.

**THE NATIONAL AGRICULTURAL SOCIETY**  
No. 17-21 West 42d Street, New York  
Therewith apply for membership in **THE NATIONAL AGRICULTURAL SOCIETY** and enclose \$2.00 annual dues, to include **THE FIELD ILLUSTRATED** and **THE AGRICULTURAL DIGEST** without further charge.  
Name.....  
Address .....

## THE RAREST AND BEST OFFER YET

A daughter of one of Dr. Miller's best honey getting queens and The Beekeepers' Review one year for only \$2.00. Every one will want one of the famous world champion honey producers. Listen to the record: A yard of 72 colonies produced in one season 17,684 finished sections of comb honey or an average of 245 sections per colony. This is without a doubt the world's record crop from a yard of that size. Start breeding a honey strain of bees by using one of those famous queens this season. This is the first time stock from this noted yard has been on sale. Our breeder, one of the very best in the Gulf States, will breed from one of those best queens, and as his original stock is of the best three-banded stock, wonderful results is to be expected. Let us book your order at this time for one of those fine queens, for we only have for sale something like 500 for June delivery. The queen is well worth all we are asking, \$2.00 and the Review a year.

### 1000 Pound Packages of Combless Bees for Sale With Queen

Did you ever ask a breeder to quote you a price upon a thousand pound packages of combless bees? If you did, you will have noticed that he took his pencil from his pocket and began to figure what such a sale would save him in advertising, postage, office help, etc., and the results would be that he would make you a very close price. Now we have that very close price on one pound packages of bees, as is usual with us to charge no profit on supplies furnished subscribers of The Review, none will be charged upon those, but our subscribers will get all the advantages of this good "buy." Notice that this close price is not for a late fall delivery, but for April and May deliveries, later deliveries at a less price will be quoted later, or by mail for the asking. Upon this deal we have two big points: First the price, second, the old experienced breeder who has spent his life breeding bees and queens for the market. We mention this so you will not get the idea into your heads this is a "cheap john" lot of goods, but they are as good as money can buy, no matter what price you pay. The price is \$16 for ten one-pound packages of those combless bees, each containing a young untested three-banded Italian queen. Additional pound packages without queens, one \$1.00 each. For larger lots ask for special price. They are shipped from Alabama by express. Book your order early. Address,

**THE BEEKEEPERS' REVIEW, Northstar Mich.**

## THE QUEEN OF ALL QUEENS



Is the Texas Queens. Send me your orders early for Italian and Carniolan. Queens, \$8.00 per doz. Bees per pound, \$1.50. CIRCULAR FREE

Grant Anderson, Rio Hondo, Texas

## QUINN'S QUEENS OF QUALITY

ARE PEERLESS—"THERE'S A REASON"

They are thoroughbred, pedigreed, three-banded Italians and Grey Caucasians. "Mendelian" bred; good qualities are accentuated. Special drones from superior mothers; results are obvious.

PRICES—Untested, April, May and June, \$1.50 each. After June 30, \$1.00 each. Tested queens of each race, \$2.00 each.

For Italians, address Ft. Myers, Fla.; for Caucasians, address Houston Heights, Tex.

**CHARLES W. QUINN**

609 W. 17th Ave., HOUSTON HEIGHTS, TEXAS

## HONEY AND BEESWAX

CHICAGO, March 18.—During the past three weeks there has been quite a free movement of honey, and stocks have been greatly reduced, as also the prices, because holders have become anxious to realize, and much of the honey has shown a tendency to granulation. Fancy comb honey is held at about 15c per pound, and anything off from this grade is from 1c to 5c per pound less. Extracted honey, white grade sells at from 7@9c, according to kind and quality, but sales have been mostly at 8c per pound for the clover and basswood, with the amber grades at from 6@7c per pound. Beeswax is selling freely at 30c per pound if clean and of good color.  
R. A. BURNETT & CO.

KANSAS CITY, Mo., March 15.—The supply of extracted honey is large and the demand very light. The supply of comb is not large and the demand is light. We quote as follows: No. 1 white comb, 24 sections per case, \$3.00. No. 2 white comb, \$2.50 to \$2.75. No. 1 amber, \$2.75 to \$3.00. No. 2, \$2.50 to \$2.75. No. 1, white extracted, per pound, 7½@8c; amber, 6@7c. No. 1 beeswax, per pound, 28c; No. 2 25c.

C. C. CLEMONS PRODUCE COMPANY.

LOS ANGELES, March 15.—The market here in California at present on honey and wax is as follows: Water-white sage, 7½c; white sage, 6½c; light amber sage, 5½c; light amber alfalfa, 4½c. All in straight carload lots f. o. b. shipping point. Choice country beeswax, 27c per pound.

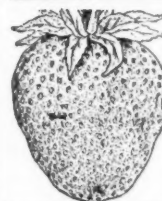
HAMILTON & MENDESON.

## NEW ENGLAND

Beekeepers will find a full line of supplies in Boston. Send for catalog.

**H. H. JEPSON**

182 Friend Street, Boston, Mass.



## 4 MONTHS FOR 10¢

Trial Subscription To Fruit and Garden Paper  
Tells about planting, pruning, spraying and selling fruit and garden truck.

Ask Us Your Hard Questions.

We conduct this department for the special benefit of our subscribers. Experts answer all questions by mail and through the columns of the magazine.

Fruitman and Gardener, 1111 Main St. Mt. Vernon, Ia.

## LEATHER COLORED ITALIANS



About April 1st I will again be ready to mail untested queens of my fine strain of Italians. I breed no other race. Choice tested and breeding queens at all times. Insure against a possible disappointment by ordering early. Satisfaction guaranteed. Circular free. Untested queens \$1 each; doz., \$9. Choice tested, \$1.50 each. Breeder, \$3.00 to \$5.00 each.

C. S. ENGLE, Beeville, Bee Co., Texas

YOU CAN'T AFFORD TO MISS THIS

CLOSING OUT SALE ON THE "LEWIS"

GOODS, 20 Percent off, CATALOG PRICE

10-frame Wisconsin 1-2 story hives 10-frame dovetail hives with Colorado or Gabel covers, No. 1, 10-frame supers. Get my special price on a complete line of the "LEWIS" goods, Dandant's foundation. Catalog of LEWIS BEEWARE free. Address, **ADAM A. CLARKE** Le Mars, Iowa

**WESTERN BEE-KEEPERS** can save honey and get the best goods obtainable, especially made to meet Western condition. Send for new catalog and special price list to **Colorado Honey-Producers' Association** Denver, Colorado





## American Bee Journal

# Notice to Northern Beekeepers!

**W**E are making a specialty of the pound package trade, and will ship from our yards at Fitzpatrick and other points in Alabama, packages and queens during April and May at the following prices: One pound with queen, \$2.00; without queen, \$1.25. Two pounds with queen, \$2.90; without queen, \$2.15. Three pounds with queen, \$3.80; without queen, \$3.00. Untested queens, single, \$1.00; six for \$4.50; dozen for \$8.50; in lots of 50 or more, 60c each. Select tested, \$2.00. Breeders, \$3.50. A special price quoted on packages of 50 or more. We have improved our pound package, making it larger, lighter and giving more ventilation.

Our vast experience with the Root Company, and our father, A. B. Marchant, enables us to know what the trade wants and needs, and we are well equipped to take care of any and all orders regardless of size. Our aim is to carry surplus so as to be enabled to fill all orders by return mail and on the day they fall due. Our stock is of the three-band Italian, and has stood the test for 20 years. **There is none better.** We have sold the A. I. Root Company two cars of bees and several hundred queens, and will sell again this season.

We guarantee safe arrival, freedom from disease, pure mating, no inbreeding, and your money refunded if not satisfied.

References: The American Exchange Bank of Apalachicola, Fla.; also The A. I. Root Company. Insure yourself against loss by placing your orders with

## The Marchant Bros., - Union Springs, Ala.

OUR POST-OFFICE ADDRESS WILL BE UNION SPRINGS, ALABAMA

Bee  
book  
free

### YOUR SUCCESS IN BEEKEEPING DEPENDS ON THE KIND OF BEES YOU KEEP AND HOW YOU HANDLE THEM

Blanke's 68 page book is not merely a catalog; it is an authoritative expert guide on the kind of apiary supplies that successful beekeepers have proved to be **profitable** in actual use. Blanke carries the largest stock of bee supplies west of the Mississippi, and can make prompt delivery. Every article carried is perfect fitting. Whether you're a beginner or an expert beekeeper you ought to get the Blanke Bee Book—send for it today.

#### Fine Poultry Book Also Free

If you keep poultry, too, ask us for illustrated poultry book; full of valuable pointers on poultry raising, as well as a catalog of profitable poultry supplies.

**BLANKE MFG. & SUPPLY CO., PIONEERS IN BEE, POULTRY, AND DAIRY SUPPLIES, 209 WASHINGTON, AVE., ST. LOUIS, MO.**

### ITALIAN QUEENS



#### THREE-BANDED

Ready April 1, of an exceptionally vigorous and long-lived strain of bees. They are gentle, prolific, and the best of honey gatherers. Untested, \$1.00; 3, \$2.75; 6, \$5.00; 12, \$9.00. Tested, \$1.25; 6, \$6.50; 12, \$12.50. Send for my free circular and price list, and see the natural conditions under which my queens are reared. Will book orders now.

**JOHN G. MILLER**

723 C Street, Corpus Christi, Texas

### OUR TEXAS BEES

Having locations where I can rear bees almost the year around. I am prepared to furnish you the very best stock of bees and queens at prices where you can afford to buy and build up those weak colonies for the honey season. My pound packages are fine for making increase at a reasonable price. One pound package, \$1.50; 2-pound packages, \$2.50; 10-pound lots, \$13; 100 pounds for \$120. Queens shipped with pound packages at 75 cents each. By mail at \$9.00 per dozen. Special prices to dealers in large lots.

**WM. ATCHLEY, Mathis, Texas**  
"The Texas Beeman"

### BEE SUPPLIES

of all kinds; low prices. Discount for early orders. Catalog free.

**J. W. ROUSE, Mexico, Missouri**

## Maine Farmer

(Established 1832)

The only Exclusively Agricultural Newspaper in America. \$1.00 per year in advance.

Issued every Thursday by

**THE MAINE FARMER COMPANY**

Augusta, Maine

# HONEY LABELS

Our Catalog No. 26 shows a very complete line of Honey Labels, nearly 50 designs in all. When in need of labels we advise that you write for a copy of this catalog which will be mailed to your address promptly.

### HONEY ADVERTISERS AND PRINTING

Honey Health Books, Honey Advertising Blotters, Honey Display Cards, Eat Honey Stickers, Honey Food Value Stickers, also Envelopes, Note and Letter Heads, Circulars, Rubber Stamps, etc., are all listed in our catalog with prices in large and small quantity. Write now for catalog or send copy for estimate. Our goods are guaranteed to satisfy or money refunded. Address,

**EASTERN LABEL COMPANY, Dept. 3, CLINTONVILLE, CONN.**







# MARSHFIELD GOODS

## BEE KEEPERS:—

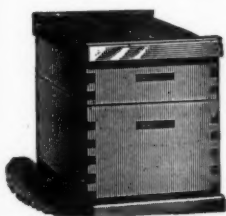
We manufacture Millions of **Sections** every year that are as good as the best. The **CHEAPEST** for the Quality; **BEST** for the Price. If you buy them once, you will buy again.

We also manufacture **Hives, Brood-Frames, Section-Holders and Shipping-Cases.**

Our Catalog is free for the asking.

**Marshfield Mfg. Co.,**

**Marshfield, Wis.**



## EARLY ORDER DISCOUNTS WILL Pay You to Buy Bee Supplies Now

Thirty years' experience in making everything for the beekeeper. A large factory specially equipped for the purpose ensures goods of highest quality. Write for our illustrated catalog today.

**LEAHY MFG. CO., 90 Sixth St., Higginsville, Missouri**

# START THE SEASON RIGHT

By using **Dittmer Foundation** the bees like it for it's made to just suit them, and is just like the Natural Comb they make themselves.

Send for prices on having your Beeswax made into Comb Foundation, which includes all freight charges being paid.

**All other Supplies in stock**

**Gus Dittmer Company, Augusta, Wisconsin**

## PORTER BEE ESCAPE



**SAVES  
HONEY  
TIME  
MONEY**

For sale by all dealers.

If no dealer, write factory

**R. & E. C. PORTER, MFRS.**

Lewistown, Ill., U. S. A.

Please mention Am. Bee Journal when writing

## FREEMAN'S FARMER North Yakima, Wash.

Successor to Northwest Farm and Home  
69 YEARS OLD

If you want a descriptive and agricultural magazine, it will inform you all about the methods in the Pacific Northwest. Send One dollar and have the magazine sent for one year. Cut rate of one-half price now on.

## Beekeepers' Supplies

Write us for our 64-page catalog. FREE. Full information given to all inquiries. Let us hear from you. We handle the best make of supplies for the beekeeper. Beeswax exchanged for supplies or cash.

**J. NEBEL & SON SUPPLY CO.,**  
High Hill, Montg. Co., Mo.

OUR VERY BEST IS THE VERY BEST

## BEE SUPPLIES

Best Sections, Best Shipping Cases

Best of all Supplies

Best prices you will get for your honey when put up in our sections and shipping cases. "LOTZ" sections and shipping cases have stood the test. Why? Because they are perfect in workmanship, quality and material. Buy LOTZ goods when you want the BEST. Our 1915 catalog ready now. Send your name and get one.

**H. S. DUBY & SON, St. Anne, Ill.,** carry a full line of our goods.

**AUG. LOTZ CO. BOYD, WIS.**

## FIELD SEEDS

Full line including seed corn. Write for price lists.

**F. A. SNELL**

**Milledgeville, Illinois**

BOOKING NOW

## Mullin's Unrivalled ITALIAN QUEENS

GENTLE AND PROLIFIC

May 1st to July 1st, untested, \$1.00; doz., \$9.00. After June 1st, 3-frame nuclei with untested queen, \$2.75. Satisfaction guaranteed.

**O. S. MULLIN**  
**Holton, Kansas**

# BECAUSE IT LASTS

That is One Argument in Favor of  
Cypress as a Beekeeper's Lumber



There are many qualities that make the value in lumber depending, of course, on the uses to which they are put. But of all virtues that of **endurance** comes first. The wood that resists rot influences longest, especially when the wood is used in a service by which it is exposed to wet and dry conditions and earth-contact—that wood is accredited with being able to give the user the greatest **INVESTMENT VALUE**.

No use tries the lasting qualities of lumber greater than that of Bee Hive construction. It is the very duce to get lumber that will not too readily rot—unless one gets Cypress lumber. Then there is a good show for endurance that means **real money saved on Repairs You Don't Have to Make**. Try it, Mr. Beekeeper.

## STUDY THE WOOD QUESTION

There's one way to get at this matter of endurance—through books of authority. Such are the 41 volumes of the internationally famous Cypress Pocket Library. These books are not "advertising"—they are authoritative references on file in the libraries of scores of technical schools and National institutes. Ask for Vol. 1 to start with; it contains the complete U. S. Govt. Rept. on Cypress, "The Wood Eternal," and a full list of the other volumes; then branch out until you cover the subject.

## SOUTHERN CYPRESS MFRS.' ASSOCIATION

1251 Heard National Bank Building, Jacksonville, Fla., and  
1251 Hibernia Bank Building, New Orleans, La.

For quick service address nearest office.

## DADANT'S FOUNDATION

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**EARLY-ORDER DISCOUNTS ON**

## DADANT'S FOUNDATION

Send us a list of the bee-supplies and foundation you will need for 1916, and we will gladly quote you our best prices.

It will pay you to buy early.

**BEESWAX**—We buy beeswax the year around and pay highest cash and trade prices. Light yellow wax from cappings is especially wanted. Your **BEESWAX** worked into foundation at moderate rates.

**NOTE** Old combs, cappings, and slumgum rendered on shares. Send for our terms. We will get all the wax and save you a "mussy" job.

**DADANT & SONS,**  
HAMILTON, ILLINOIS.